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BUILDING TRADES' NUMBER.

THE architects controlling Architecture do not permit "write-ups." Realizing that the advertisers can impart much valuable information to the profession, they devote the reading matter of this issue to the advertisers' interests—the large photographic plates appearing as usual.

MODERN PROGRESSION.

OUR attention is repeatedly called to the ordinary dwelling of twenty years ago in comparison with the modern home in size and style of finish, while the mansions of the successful financiers and the substantial office buildings of to-day are marvels of engineering skill and beauty of design. It is well known that one branch of business cannot suffer without affecting to some degree all others. The same rule applies to modern progression and the elaborate exterior calls for proportionately elaborate interior furnishings. The struggle to produce the best has developed and placed before the public such exquisite examples of man's genius, that the breach between the progressive and unprogressive has been necessarily widened. "The marvel of the fittest" stands out with special emphasis to-day and probably no manufacturing interest has felt the force of this saying more than where modern sanitary laws affect their products.

The Peck Bros. & Co., starting about fifty years ago, in one room, for the manufacture of Plumbers' Brass Goods, with wise forethought comprehended the possibilities that would emanate from a rigid adherence to upright dealing and perfect goods.

While many competitors have been forced to throw up their hands, The Peck Bros. & Co. have slowly, but surely, come to the front and to-day stand second to none as leaders in the manufacture of Plumbing Appliances. From their modest beginning, they now occupy upwards of 150,000 square feet of floor space, equipped with the most modern machinery and experienced workmen.

Conditions that confronted a manufacturing concern some years ago are vastly different to-day, especially so in plumbing fixtures. Bibbs, basin faucets and stops then constituted the bulk of their output, while to-day the variety is so great it would be difficult to enumerate them. In bath room fixtures the latitude for new ideas has been large and while all the leading manufacturers make about the same line of staple goods, The Peck Bros. & Co. are known to control many inventions in specialties which have met with marvelous success. Among these might be mentioned the "Triumph" Basin Waste, the sales of which have far eclipsed that of any basin fixture heretofore in the market. The "Universal Sanitary Closet Floor Connection" has solved the problem of absolutely tight joints that will stand the severest test. With this connection the roughing in can be accomplished and the test made at any time, while the closet can be installed at any indefinite period. This connection has been officially approved by the Board of Buildings of the City of New York and is destined to be universally used in all important buildings. The Nethery Hydraulic Flush Valve is another of their productions which in spite of the stigma regarding flush valves is fast convincing the architect of its merits and has been installed in many large buildings with satisfactory results. The "Triumph" Bath Waste, a companion to the basin waste of the same name, needed no introduction to the trade to prove its efficiency and has already won an enviable record as a sanitary and perfect working fixture. The "Manhattan" Solid Porcelain Lavatory, which has been so popular, was designed with the idea of lightness and durability and intended to overcome the objectionable heavy appearance of most porcelain lavatories, and at the some time to take the place of the marble slab, which in many cases has had to make way for this new design of porcelain slab and basin combined. For beauty of design, lightness in appearance and durability, it stands at the head to-day. These are a few illustrations of the many new ideas originated and brought before the public in the last few years by this enterprising concern, that have done so much to emulate modern plumbing.

The shower bath, which at one time was looked upon as simply a pleasant form of bathing, is now considered a necessary adjunct to a well appointed bathroom, and is an indispensable article in public baths. The increasing demand for showers has been so great that Peck Bros. & Co. have devoted a large space to their manufacture, and are annually building hundreds of every form and variety, from the ordinary wall shower to the most elaborate and completely made. It is the most invigorating form of bathing, and the sensation experienced is refreshing and healthful.

Peck's Silver White metal has proved a most important article in their line, and is the result of long and costly experimenting. This metal is especially valuable where the wear is excessive, as the more it is rubbed up the better it appears. This is not a plated metal, consequently never wears off, and is used extensively for all exposed plumbing. The increasing demand for Peck's Silver White metal carries its own recommendation.

Among the many representative buildings which have been fitted with the Peck Bros. & Co.'s goods might be mentioned the residence of Moses Taylor Payne, Esq., James Stillman, Jr., and Mrs. Lionel Sutro, of New York City, and Henry W. Seligman, Esq., of Elberon, N. J.; the "Hampton Terrace" Hotel, of Augusta, Ga.; the "Ansonia" and "Webster" Apartment Hotels and the Knickerbocker Trust Co., of New York City. The Bessemer office building of Pittsburgh is now being equipped with their fixtures. The "Ansonia" Apartment Hotel is shown on another page in this issue. The branch offices at 27 West 42d street, New York City, and on Fort Hill Square, Boston, as well as the main offices, have elegantly equipped show rooms for the convenience of all interested in up-to-date plumbing. The company has lately been refinanced with sufficient capital to expand proportionately to the increasing demands made upon them.

THE ÆOLIPYLE.

AS ILLUSTRATING the fact that "there is nothing new under the sun," it may be noted that Hero of Alexandria, living in the third century, B. C., invented an apparatus for "exciting combustion," which he called an Æolipyle. His invention died with him, but twenty-two centuries afterwards a Yankee devised an apparatus for perfecting combustion and called it the Æolipyle.

The Æolipyle is applied at the smoke collar of a furnace, steam boiler or hot water heater, and is durable, simple in construction and easily operated. The gases are held in check by the hollow revolving chamber of the Æolipyle, and the air which is drawn in through the hollow trunnions attains a high temperature while passing through this chamber, from which it flows out through perforations provided therefor and mingles with the gases and causes their combustion.

With an Æolipyle attached to it, the care of the heater in an ordinary dwelling house is simplicity itself. In the morning the ashes are shaken down, the required amount of coal put on the fire and drafts opened for a little while. Then, after closing the lever of the Æolipyle to the point which experience has proved to be the proper one, no further care is necessary until night, when, unless the weather is very cold a few shovels of coal will carry the fire until the following morning. During the entire day and night an even temperature will be maintained throughout the house. No opening and closing of drafts during the day will be necessary and in the morning a warm dining-room is assured. The ashes shaken down will be clean, as little or no clinkers or unburned coal will be found in them, thus making the sifting of ashes unnecessary. A careful estimate by several thousands of users, who have the Æolipyle in operation, gives the saving in coal at from fifteen to twenty-five per cent. This is effected in two ways—by the burning—turning into heat—of all the coal gas and by the even rate of combustion. Of course, that great curse in nearly all houses, the escape of coal gas, causing the tarnishing of silver and injury to the health of the inmates, is eliminated by the burning of the gas, providing, of course, the heater is in fair condition.

The Æolipyle will ordinarily save enough coal in one winter to pay for its cost. Any furnace man or plumber can apply it and any servant can manage it. The salient features of the Æolipyle are: A saving of from fifteen to twenty-five per cent. of coal; increased heat; maintaining an even temperature throughout the house day and night; a saving of labor and avoiding the sifting of ashes—almost any one of which is worth the expense attending its attachment to a heater. After a prolonged and severe test the Æolipyle has been adopted by the United States Government; a large number of architects have specified it; many school boards have adopted it and thousands are in constant use by individuals.

The Æolipyle as applied to high pressure steam boilers is simple in its construction and operation and its success has been uniform and continuous. It is a practical solution of the problem of how to utilize the gases from the fuel which are ordinarily wasted, as by its use these gases are burned, producing an economy of fuel, increased heat and a higher steaming efficiency. The Æolipyle is equally efficient with bituminous coal or anthracite. With bituminous coal the objectionable and wasteful black smoke is almost wholly prevented, as nearly all the material usually deposited as soot in the boiler tubes is consumed. This also renders frequent cleaning of the tubes unnecessary.

The address of the manufacturers is, Æolipyle Company, 237 Water Street, New York City.

HORTICULTURAL ARCHITECTS AND BUILDERS.

THE advance in horticultural architecture for the past few years has been most marked, largely owing to the many improvements invented and placed in greenhouse structures by the firm of Lord & Burnham Company, of Irvington-on-Hudson. The modern greenhouse of to-day is built on scientific principles, ribbed with iron, and equipped with hot water or steam. Traveling salesmen who visit this country every year in the interest of the great foreign nurseries and travel the entire United States openly acknowledge that there is nothing in Europe to compare with the greenhouses in this country.

The elliptical roof was invented by Mr. Lord in his early career, but it still furnishes the principles upon which the best modern greenhouses are built.

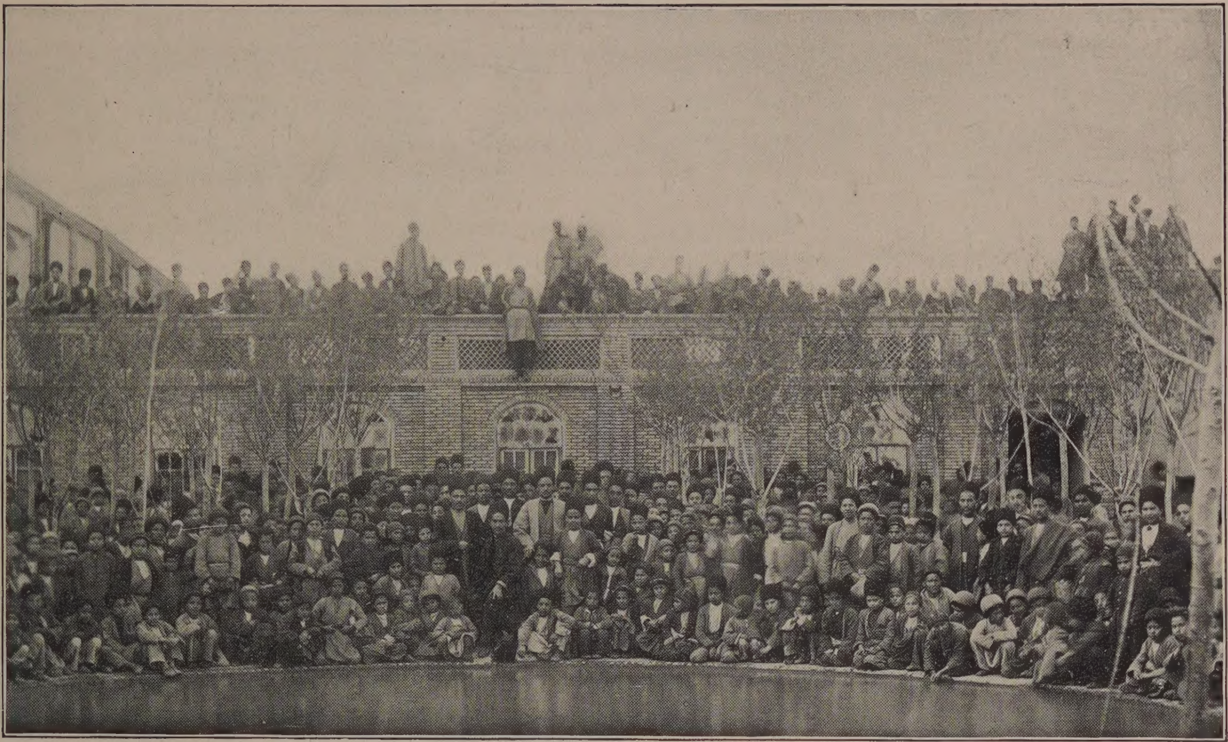
The introduction of the iron frame by the Lord & Burnham Company followed in 1881. This announced the modern American greenhouse, and its appearance gave a tremendous impetus to the business. It was quickly adopted by other builders, but the latter made a mistake carefully avoided by the more experienced inventors. The method of the Lord & Burnham Company has always been to cover the iron with wood. The non-conductor, which, by protecting the iron, prevents contraction and expansion and consequent breakage of glass. It may be added that cypress is the wood mostly used by the Lord & Burnham Company in its greenhouse work, a material almost as indestructible as iron itself.

The secret of building a good greenhouse lies in knowing how to make plants comfortable. Light supplies plant life; heat, plant growth. In their scientific study of every horticultural problem, from that of judicious location to the final completion of the plant home in every detail, the Lord & Burnham Company are still the pioneers of their craft. They were the first to introduce long lines of ventilators, thus to a great extent doing away with the drafts so injurious to plants; the first to increase the light by using small sash bars with supporting frames; the first to use elliptical or Gothic curves, instead of circular, in roof construction. The arm rod and worm gear ventilating machinery now in universal use was invented by Mr. Lord in 1856. Lord & Burnham Company were the first to use ground glass in conservatories, and the first to substitute cast iron gutters and sills for wood or iron frame greenhouses, and they introduced iron frame supports for beds and tables, even before they originated the present method of iron framing. The first iron frame superstructure was erected for the late Jay Gould, in 1881, at Irvington-on-Hudson.

The Lord & Burnham Company received the award for heating apparatus at the Columbus Exposition, and five other highest awards for conservatories, rosehouses, greenhouses, iron frame plant tables and beds, and ventilating machinery.

To reduce greenhouse heating to automatic perfection, to minimize all mechanical labor and to provide for all emergencies, requirements and environments has been the constant study of the Lord & Burnham Company since its origin.

W. Addison Burnham is the President; Warren B. Craw, Treasurer; Lyman B. Craw, Secretary; Henry F. Lord, Superintendent; Andrew Elder, Superintendent of Erection, of the firm of Lord & Burnham Company. They issue separate catalogues, one of greenhouse construction and the other of greenhouse heating and ventilating, which will be sent upon request to any interested party on receipt of five cents in postage for each. While their general office and works are at Irvington-on-Hudson, they have a branch office in New York City, located at 1133 Broadway, corner 26th Street, from which office the catalogues can be secured.



Group of Weavers and East Wing of Main Factory of Costikyan Bros. & Co., in Tabriz, Persia.

FROM THE LOOMS OF PERSIA TO NEW YORK.

TO MEET the demand is the essence of commerce. To foresee the demand and to meet it with conditions that give it a wholesome stimulus, is the work of the true merchant. This is the story in a word of the revival and the present flourishing status of the rug trade depending upon the historic looms of Persia, and which finds its complete and characteristic representation in the United States in the establishment of Costikyan Bros. & Co., who have their American headquarters at 147 Fifth Avenue, New York City, where their salesrooms are replete with the best products of Persian looms under the hands of the leading master artists of the day.

The phenomenal incoming of the reign of the highest ideals of architecture in the United States, through the untiring zeal of the leaders of the supreme craft which calls for, in the disciple, the combined genius of the engineer and the vision of the poet, at once, has been the authoritative herald of a new American era in which the quest for the highest and best in art has become the order of the day for all who lay any claim whatever to culture and refinement.

Coming to the literal ground work of the decoration of the interior, it was the work of a day to find that nowhere was there a product of true art fit to lie upon the floor amid artistic surroundings equal to what the master weavers of Persia were still capable of producing. Here was an art which was native to the soil, and, like all true art, depending not upon mechanical devices and courses of schooling, but the genius that fed on love of the art and the ambition to maintain the fame that was local as well as national. Thus were produced the master-pieces that now adorn the palaces of the Orient and the museums and not a few mansions of the West. Thus to-day are the weavers of Persia, with the same inheritance of genius and ambitious zeal, producing marvelous floor coverings that fit into and enhance the highest conceptions of the western decorator in beautifying a country home or palatial residence of a metropolis.

The picture here reproduced is of a part of the more than fifteen hundred weavers of Costikyan Bros. & Co.'s looms in Persia, gathered before one wing of the quadrangle of the weavers' halls, and shows something of the atmosphere in which from early childhood these artist weavers grow up, many of them to world-wide fame. Nor are the lines of distinction in the Persian weaver's work at all different in principle from those in other fields of art. Here, too, the true master's work throws the common product into the shade as a thing out of class and not to be held in comparison. In the immense stock of Costikyan Bros. & Co., on the floors of their salesrooms at 147 Fifth Avenue, New York, are displayed among a thousand carpets all sizes and grades of the choicest masterpieces from the looms of Persia. There are exhibited among other weaves, KERMANS, KHORASSANS, SARUKS, LULEHS, and a whole line of TABRIZES from their own looms, to see which becomes a revelation of what the master artists of the Persian looms are producing in the perfection of fine weaving and the creation of gorgeous color schemes, vying with the charms of exquisite and chaste designing, after the most admired themes of priceless ancient masterpieces. It is an exhibition well worth the interest of all who value true art. And for the practical service in decoration, there is nothing wanting here in grade or variety in the vast assortment, including the largest sizes and the choicest specimens sent out of Persia. Here are to be seen, also, most interesting pieces woven to order to fit into special schemes of decoration, after designs submitted by Costikyan Bros. & Co. These designs conserve all the genuine art of the Orient, simplifying and adjusting merely to meet modern requirements.

No less serious attention is given by the firm to collecting and importing a select stock of the smaller rugs such as come from the various provinces of Persia, and which render an important service in the completing of interior decoration. There is thus at the headquarters of Costikyan Bros. & Co. an equipment to meet every requirement in Oriental rugs and a stock to satisfy the most fastidious artistic appreciation.

LARGEST IN THE WORLD.

THE Trenton Potteries Co. have been for years, and are now, the only manufacturers in the United States of both Sanitary Vitreous China and Solid Porcelain Goods.

To-day, they are operating fifty-two large kilns and ten decorated kilns and covering twelve acres of ground; they are the largest makers of these wares in the world. Working on the theory that quality is the first essential, this company has bent every energy and spared no pains to present perfectly sanitary ware of durability and beauty. The skill and nicety required in the process of manufacture to secure all these conditions, necessitated years of labor and experiments on the part of those already adept in the various manufactures of the Ceramic Art. The end has justified the means, and the stamp of the Trenton Potteries Co. on any piece of work is indicative of sanitary properties, durability, beauty of design, finish and color, and an absolute guarantee against imperfections in manufacture. This guarantee, backed, as it is by the unquestioned responsibility and the integrity of the company, makes those who use these goods absolutely safe from the possibility of any other installation, and insures satisfactory service.

As makers of both Sanitary Vitrified China and Solid Porcelain Wares, the opinion of The Trenton Potteries Co. as to the kind of ware to be used for different purposes, should be of value, it being unbiased by prejudice from either. Sanitary Vitrified China is advised for closets, basins and urinals. Lavatories can be used in this grade of goods, if desired, as they have been successfully made by The Trenton Potteries Co. for years. Solid Porcelain Ware is strongly recommended for bath tubs, lavatories, laundry tubs and sinks.

This ware is protected first by a thick white vitreous lining, and over this is a vitreous glaze. This gives unusual strength and thickness, with consequent durability, which enables it to stand hard usage. The vitreous lining, covered by the vitreous glaze, insures perfect sanitation. It gives a rich color, and makes it possible to obtain a soft, satiny finish that characterizes the beauty of this particular ware.

The company now has two large potteries manufacturing this Solid Porcelain Ware exclusively, and four large plants manufacturing Sanitary Vitrified China exclusively.

FRINK REFLECTORS.

IN SOLVING the varied problems of effective lighting, I. P. Frink, manufacturer of reflectors, New York, has long been the master. Well known for his reflecting chandeliers for church and auditorium lighting he has recently made a success of lighting squash courts, mural decorations and art galleries by means of reflectors specially designed for each. In many private houses mural decorations are being used and the ordinary lighting is entirely inadequate. Architects interested in special lighting effects, will be cheerfully advised and estimate furnished on whatever work of this nature they may have. Some of Mr. Frink's contracts in the above lines were: Racquet and Tennis Club, New York; Manheim Pool House, Philadelphia; Chamber of Commerce, New York; "The Holy Grail," Boston Public Library; and Drexel Institute, Philadelphia.

Bronze Vase for the Twentieth Century Club, Buffalo, N. Y.
Green & Wicks, Architects.
Executed by the Gorham Manufacturing Company, New York.

IN BRONZE AND BRASS.

ARCHITECTS and sculptors who mark the executed work in bronze and brass are aware of the fact that the Gorham Manufacturing Company, New York, has kept faithfully to the front in the steady advance of artistic and constructional detail in the several lines which they represent. No opportunity has been lost in making innovations and affording conveniences for the carrying out of truly first-class work. A recent addition to the foundry has made an important increase of facilities. Their artisans are men of intelligence, and of high ability and long experience, and their work is invested with the true spirit and feeling desired by the designer. The elaborate decorations and more substantial work now being called for in the equipment of large banking and commercial institutions, afford excellent opportunities for the architect and founder. The Gorham Company is well equipped for this line of work and will submit estimates from architects' scale drawings and will make full size working drawings from the same, where necessary.

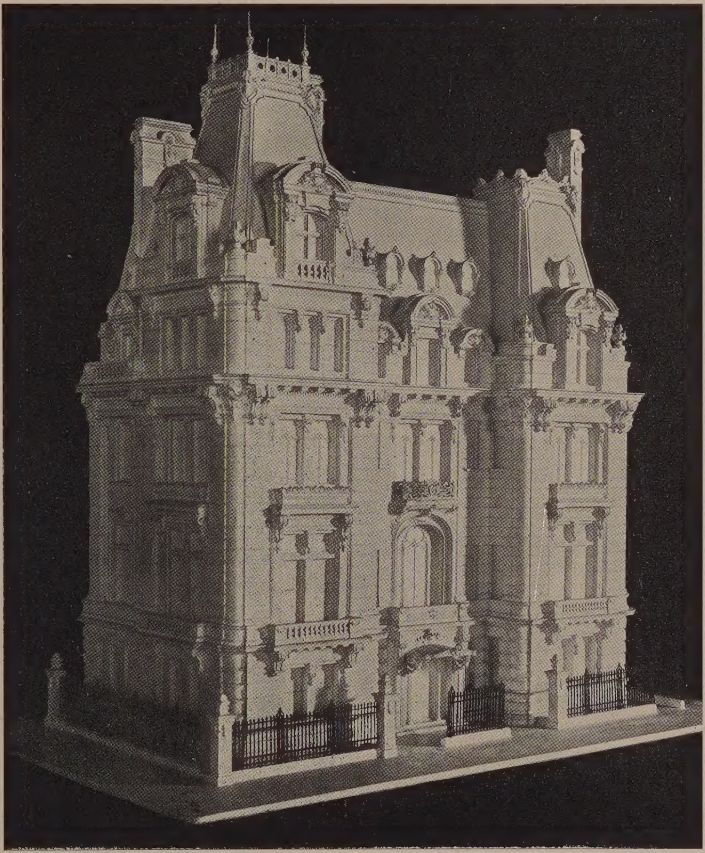
Among the important contracts now under way are: the bronze counter screen for the National Savings Bank at Albany, N. Y., M. T. Reynolds, Architect; bronze entrance doors for Auchincloss House, Robertson & Potter, Architects; bronze counter screen, Butler County National Bank, Mowbray & Uffinger, Architects; bronze show-case for Havana Tobacco Co., McKim, Mead & White, Architects; bronze screen, main hall, Union Club, Cass Gilbert and John DuFais, Associated Architects; banking frames and transom, Bank of the Metropolis, Bruce Price, Architect; bronze hand railings, New East River Bridge, Brooklyn and New York approaches, Pennsylvania Steel Co.; cashier's screen, American Insurance Co., Cass Gilbert, Architect; bronze vestibules and doors, Brooklyn Institute of Arts and Sciences, McKim, Mead & White, Architects.

Among the large casting contracts now under way are: Sherman memorial, including Sherman equestrian, with four standing figures, two groups, four bas-reliefs, eight medallions as per model of the late Carl Rohl Smith; colossal statue of General Dodge, J. Massey Rhind, Sculptor; colossal eagles, Smith Memorial Arch, Philadelphia, J. Massey Rhind, Sculptor; bas-relief and bronze trimmings, for Cruiser "West Virginia," J. Massey Rhind, Sculptor; colossal statue of Ericcsson, J. Scott Hartley, Sculptor; sitting statue of Dr. Hunter McGuire, of Richmond, Va., William Couper, Sculptor; Andrews memorial, Geo. T. Brewster, Sculptor; Beekman memorial, W. F. Beekman, Architect.

HUMPHREY CRESCENT INSTANTANEOUS WATER HEATERS.

THEY are made of the best grade of copper, nickel plated, the valves of brass, and the large powerful burners of cast iron. They are practically indestructible, a necessity in every bathroom ; an ornament in the finest. They are fitted with duplex safety valves to prevent the gas being turned on without the water.

These wonderful Heaters, connected to water and gas in bathroom or kitchen, produce hot water instantly in any quantity. They are not reservoirs—the water is heated instantly as it passes over the heated surfaces, and in such quantities that storage is unnecessary. The luxury of a hot bath is within the reach of all. Remember, one cent buys a hot bath, ready at any minute. Because of their quickness and economy these heaters are in great demand. They produce hot water instantly at the rate of two to three gallons per minute, even though every fire has been dead for days, and the expense ends the moment the gas is turned off, an economy which cannot be obtained with any other system.



Residence, Capt. J. R. DeLamar, Madison Avenue and 37th Street, New York.
C. P. H. Gilbert, Architect.

No lime is deposited on the heating surfaces, as the temperature required for baths, etc., rarely exceeds 110 to 120 degrees, at which temperature lime is not precipitated. For this reason these Heaters can be used with alkaline waters that would soon render other devices entirely useless.

We guarantee them to be in every respect as we represent, and to be the finest, most efficient and most complete Instantaneous Water Heaters ever offered to the public.

When the heater is locally installed, you turn on the gas and water together, put a lighted match to the burner, and instantly hot water pours from the spout—a tubful costs one cent, and there is no work for any one. When you have enough, you turn off the gas and water together and all expense ceases at once.

The claim we make is simply this—that the Humphrey Crescent Instantaneous Water Heater saves time, because it heats any quantity of water instantly, day or night ; saves money, because it heats exactly the amount of hot water wished, so that there is no waste heat or water. Also, it utilizes every heat unit possible. There is no waste gas.

The fire burns only when the water runs. It is the only heater that furnishes a constant and unlimited supply of hot water, heating it instantly, so that there is no expense of heating and reheating the same water, no storage tank to occupy space and heat the room, no complicated pipes to put in and repair, and no labor for any one. So simple a child can manage it, absolutely safe, practically indestructible. The manufacturers are the Humphrey Manufacturing and Plating Co., Kalamazoo, Mich.

HEATING AND VENTILATING.

WALKER & CHAMBERS of No. 50 East 20th Street, New York City, are now entering upon their fifth business year as engineers and contractors for heating and ventilating, and their record of nearly three hundred plants successfully installed, in this short time, indicates that they are energetic, and their organization has developed and been perfected to handle their ever increasing business. The policy of this firm is to do first-class work and give their clients prompt and intelligent attention.

They have a corps of trained engineers, an excellent sheet iron shop, and every modern convenience and facility for prosecuting their special line of work. They will design, in coöperation with the architect, to meet the needs of any class of building, for providing pure air, uniform temperature and power plant for running machinery, with a minimum expenditure of time and money. They will design and contract for the heating apparatus for the cottage or residence, or a plant for the large hotel or office building, requiring the greatest engineering skill and ingenuity.

Among the buildings equipped by Messrs. Walker & Chambers, may be mentioned : The new Speyer Bank, the Broadway Tabernacle, Capt. J. R. DeLamar's Residence, Hotel Navarre, Keech Residence at Tuxedo, Mellon Residence at Morristown, Administration building—Yale College, Reynal Residence at White Plains, etc.

FIRE-PROOFING OF WOOD.

AMERICAN Wood Fire-Proofing Company, Ltd., whose plant is located at Newark, N. J., on the Manufacturers' Branch of the C. R. R. of N. J., with dry-kilns, yards and docks on the Passaic River, have been running to capacity for over a year. The demand for fire-proofed wood is increasing constantly, and many of the builders and architects who, at first opposed it, now are heartily in favor of using it.

During the past year the company has fire-proofed all the wood that was used in the construction of the Wall Street Exchange Building, and the Whitehall Building; also treating several hundred thousand feet for the Hanover National Bank, and during the past few months they have treated over 950,000 board feet for Messrs. V. J. Hedden & Sons' Company, of Newark, general contractors for the Metropolitan Life Insurance Company's new building. This contract includes mahogany, oak, yellow pine flooring, white pine, spruce and chestnut.

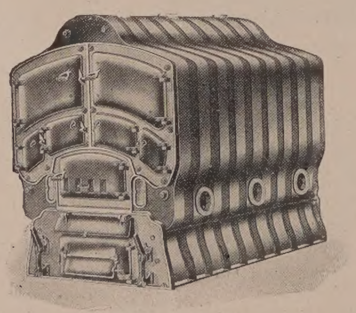
The Hon. Henry S. Thompson, Superintendent of Buildings, recently notified the American Wood Fire-Proofing Company, Ltd., that "on and after the 8th day of June, 1903, all companies supplying fire-proof wood to be placed in buildings in the Borough of Manhattan, must have the wood to be furnished tested by this Bureau at the companies' expense, by selecting a sample in every two thousand feet, before any of the wood leaves the works of the company." Previous to this, one of the companies had what was called an "unconditional acceptance," which permitted them to supply wood, under the law, without test, the other two companies being subject to test. All companies are now on the same basis.

The American Wood Fire-Proofing Company, Ltd., have recently treated mahogany, cherry, red oak, ash, poplar and white pine for the United States Navy, tested and approved by the Bureau of Construction and Repair, for the following United States warships: Cruisers "Chattanooga" and "Galveston"; monitor "Florida," and destroyers "Hopkins" and "Hull." Also for the Mare Island and New York Navy Yards.

We quote from the official report of the Underwriters' Bureau of Fire Protection Engineering, of tests made on wood treated by the American Wood Fire-Proofing Company, Ltd.:

> "The process of manufacture differs from and has a decided advantage over any heretofore investigated, in that deliquescent salts are not depended upon to produce the fire-resisting qualities, and the treatment is not confined to the surface of the wood."
>
> "For the interior finish of fire-proof buildings and vaults, in the construction of dry rooms, stock racks, decks, partitions, etc., for electric wire moulding and other race-ways, and for all purposes where the added cost of wood so treated will allow its introduction, this material will prove of benefit to insurance interests."

Further particulars relative to wood fire-proofed by the American Wood Fire-Proofing Company, Ltd., may be had at the New York office of the company, 156 Fifth Avenue, Corner of 20th Street.



IMPORTANCE OF RELIABLE HEATING.

THE members of the architectural profession of America can be congratulated upon the increasing appreciation that they are manifesting for the practical features of residence construction which in many other countries are overlooked. It is unquestionably true that the American architect exhibits in the practice of his profession a more close regard for the inner equipment affecting comfort and sanitation than any of his professional brothers in other countries. While their appreciation of the art of architecture and of its application to external ornamentation in residence work rivals, and is destined to outrival, the work of those practising in close contact with the models erected by ancient schools, underlying these outer expressions there is a keen regard for inner equipments. Upon the working effects of these inner equipments in no small measure depend the appreciation of the owner for the features of design and ornamentation.

So it seems and is apparent that those architects whose advice, interest and judgment lead their clients into the adoption of the very best appliances for heating, ventilating and plumbing a residence, are demonstrating that measure of success which is only obtained by a broad view and recognition of all the interrelated necessities of residence architecture and by conforming closely thereto.

That a regard for these features serves the interest of the architect is indisputable. The owner of a new and elegant home is rarely attuned to enjoy the fine architecture of his domicile for which many thousand dollars has been expended with painstaking care, and from the enjoyment of which he has long anticipated much pleasure, if the first winter's occupancy is attended by the use of a faulty or a scant system of heating. Beautiful effects in highly wrought wood, marble or bronze cannot be enjoyed in an atmosphere of chill and discomfort. Renaissance and rococo lose their charm to the irritated thought of those who spend their evenings shrouded in shawls and hugging fireplaces for scant comfort. The most elaborate and otherwise most delightful dinner possible served in a dining-room rich in leather, wood, tapestries and bronze, palls and becomes a long drawn effort unless the air is warmed to the right temperature. And a business man who has arisen, bathed, dressed and breakfasted in chilling apartments does not arrive at his office in the most excellent condition for business, nor in a state of mind from which proceeds the most healthful praise for the services of the architect whose interest, or lack of interest, is responsible for his discomfort.

A few experiments of this character among the clients of an architect have strong influence to lead him, when making up his estimate of the complete cost of a residence, to ignore temptations to devote too much of his client's appropriation to externals at the expense of those absolute essentials which are requisite to making the residence a home in a larger sense,—making it a place of comfort to its occupants and of delight to its guests.

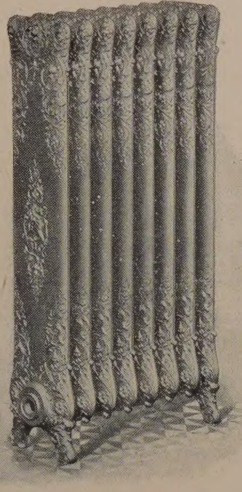
So the trend has been increasingly toward the adoption of the best methods of steam and water warming for residence work as being most sure and reliable. The results of their employment go so far toward making the home more acceptable that the architects who independently resist the temptation of their clients to superficiality, build their practice on the surest and best foundation. And it is a noteworthy fact that the American architect, when consulted, is generally very competent to advise. While they naturally desire and expect that accountability for successful installation shall rest upon those who assume the responsibility therefor, their counsel and advice is usually extended to the recommendation and adoption of best methods and apparatus.

Architects who desire to serve their clients best and place themselves into positions which warrant their confidence and judgment are very much assisted by specifying and recommending the use of IDEAL Boilers and AMERICAN Radiators. The

Radiators are widely known and appreciated throughout America, Europe and other countries for the richness of their design, the fine superficial finish and wide variety of ornamental and plain patterns. The assortment embraces many odd forms and shapes to fit any architectural requirement.

The IDEAL Boilers are made in twenty-four different patterns, for steam and water,—embracing about two hundred different sizes. They are of modern yet time-tested construction,—highly perfected in detail and general features. They are conservatively rated and are known to bear the architect out in his specifications and recommendations.

The sale of these goods is not confined to special agencies at any point. They are sold to all responsible heating contractors. The American Radiator Company, general offices, Chicago, is at all times pleased to co-operate with architects in this important matter of equipping American homes with the best of appliances, by sending them upon request catalogues and other information concerning these goods.



CONDITIONAL AND UNCONDITIONAL.

THE Electric Process for the Fireproofing of Wood enjoys the unique position of being the only process extant which has been approved by the Department of Buildings *unconditionally*.

As the result of a thorough fire test upon a house built of wood which had been treated by the Electric Fireproofing Process and the official report made thereupon May 31, 1900, the Department of Buildings in New York City, under three Commissioners then in office (Brady, Guilfoyle and Campbell), unanimously approved the Electric Process as the standard process of treatment for the fireproofing of wood which might thereafter be used in the construction of buildings over one hundred and fifty feet in height, in accordance with Section 105 of the new code of Building Laws.

Other companies having processes for treating wood as fireproof at various times, during the same year had importuned the Department for a similar unconditional acceptance; this the Department could not give as the result of exacting tests made by the Engineers of the Department did not justify them in so doing, but, as the report of the Engineers showed for these companies some amount of fire-resistance, the Commissioners, in order to encourage their efforts, granted them a *conditional* approval only.

All the wood used in no less than seventy-five warships constructed by the United States Navy was treated by the Electric Fireproofing Process, and the wood incorporated in the construction of many of the most prominent buildings in New York City has been rendered incombustible by the same remarkable process. Some of these buildings were erected seven years ago, and wood from these has been recently tested with most gratifying results, proving absolutely the permanent quality of the fireproofing.

One of the most notable of these buildings is that of R. G. Dun's Mercantile Agency Building at Broadway and Reade Street. Among the others are the Commercial Cable Building, Queen Insurance Building, Atlantic Mutual Insurance Company's Building, the Hotel Martinique, Kuhn-Loeb Banking Company's Building, and the Blair Building.

KENT—COSTIKYAN.

THE sale of Oriental Rugs has wonderfully increased during the past ten years, and the demand is growing and keeping pace with the better knowledge among Americans of their value and wearing qualities, and also of their color tones, which have not been successfully imitated in other fabrics, although efforts to this end are constantly being made.

It is to be regretted, however, that the demand has so stimulated production that a distinctly lower class of rugs is being brought to this country to fill requirements for cheaper floor coverings, and in some districts in the Orient almost the entire population is now engaged in turning out as rapidly as possible rugs which are poor in material and weave, and crude in color. Such work is so entirely foreign to the nature of the Oriental, to whom time is eternity, that it is spoiling him as well as the rug, for while he is a shrewd trader, he cannot be a quick one. The charm of barter, the genuine pride in the result of patient work, and the diplomacy exercised in disposing of the finished products are gone, and with them the artistic temperament. The commercialism of the West has no place in the atmosphere of the Orient. They cannot live together.

Fortunately, tradition is too strong in certain sections of the Orient, notably in the Persian Empire, to be corrupted, and for thousands of years, generation after generation have followed, with infinite patience and with the true feeling of the artist, the making of rugs into which are woven sentiment, history, poetry and love for the beautiful. True art lives, and the rug, modern or antique, which has in it full measure, finds a place with the real art of the west. There is growing appreciation among the cultivated people of this country of the Persian rug and its possibilities.

Our dealings are with the trade and profession; architects and decorators will find opportunities to secure that which they need to carry out their schemes, and their clients will be received with every courtesy when introduced by letter or in person.

We invite attention to our facilities to furnish throughout hotels, business offices and apartment houses. We guarantee our rugs, and will, at all times, protect the interests of our clients. Careful attention is given to special orders for unusual sizes, for sets and combinations which shall be in harmony with their surroundings, and conform to general decorative plans.

Whenever our buyers in Persia find a rug of exceptional value because of its antiquity, condition and associations, they are instructed to secure it for us, if possible, and we have, therefore, the opportunity to show to our friends as comprehensive a collection of antiques as can be found outside of a museum and some private residences. Our stock is unique in this market, and we can comply with the most exacting demands. The moderate-priced rugs, as well as the finer and more expensive pieces, are artistic, genuine and of intrinsic value.

We invite special attention to some of the larger carpets, which are rare in size, perfect in design and color, and worthy of a place among other real art treasures. They are well fitted to complete the best work of the architects and decorators. Connoisseurs or others interested are cordially invited to call at our warerooms, 890 Broadway, New York.

KIE

THE PERFECTED ROOFING TERNE.

THE American Tin Plate Company is making a terne that must interest every architect everywhere. It is called U. S. Eagle N M (new method), and it is an improvement on their famous M F (most favored) terne that has been the standard terne, America and England for more than a half century.

The New Method is a finishing process through which the plates pass after they come out of the tinning pots. The treatment the plates receive effects an instantaneous setting of the coating mixture, so that the plates get an evenly thick coating from end to end and from side to side. The plates receive a smooth, mottled surface, free from dirty grease, cleanly to handle, and when finished have, in addition to the metal coating, a cover of transparent paint that does not interfere with the easy soldering qualities of the plates, but acts as additional protection against unfavorable atmospheric influences.

The U. S. Eagle brand is made so that it fills strictly all the prescribed requirements of the United States Navy Department in accordance with the following specifications, and a guarantee to this effect is given with each box.

1. After the pickled, annealed and cold-rolled black plates have been cleansed in a weak acid solution, they are thoroughly washed in clean water, after which nothing is brought in contact with the black plate but pure palm oil, pure new lead and pure new tin.

2. The coating consists of thirty-two per cent. pure new tin to sixty-eight per cent. pure new lead. The coating is thoroughly amalgamated with the black plate by the palm oil process.

3. When the plates come out of the tinning pots they are placed horizontally in a setting bath of liquid oily substances of a temperature below the melting point of the coating mixture, to compel perfect coating.

4. All U. S. Eagle N M plates are carefully assorted and are free from defects, blisters, bad corners or imperfectly coated spots.

5. Each sheet is stamped with U. S. Eagle N M trade mark.

These requirements are specified by the United States Navy, and, as usual with government specifications, are very exacting, insuring the very highest possible grade of roofing tin, which the manufacturers guarantee to surpass—in plating, workmanship and finish—the product of every other mill in the world.

Another feature of this very heavy coating and careful selection of black plates is the greater flexibility and pliability in working, a condition that will be greatly appreciated by the mechanic and the builder, as well as by the purchaser.

Architects are invited to send to Mr. W. C. Cronemeyer, agent, Carnegie Building, Pittsburgh, for samples of U. S. Eagle N M and M F ternes, as well as for a copy of the booklet, "A Fifty Year Roof," a manual of terne manufacture and roof-making, which contains a great volume of tabulated matter and formulæ of value to every one concerned in house-making. The American Tin Plate Company produces many other brands of roofing—all reliable in their various spheres of usefulness, in various weights and in the usual sizes, but recommends the use of the best, because the best is the cheapest in the end. All products of this company are sold by the first-class wholesale metal houses throughout the United States.

ELEKTRON MANUFACTURING CO.

THE forging to the front of the Electric Elevator has been more marked than any other development in the building line. Among leading architects, engineers and builders, electricity seems now to be firmly established as the best, most reliable and economical power for this service.

The Elektron Manufacturing Company was early in the elevator field and has developed and brought to a high point of operating efficiency various types of automatically controlled elevators for private residences, as well as standard types of passenger and freight elevators for office, mercantile and apartment buildings.

In the line of automatic control, they have gone more deeply than most other concerns, in placing on the market book-lifts and dumb-waiters, operated from the various landings by push-button systems.

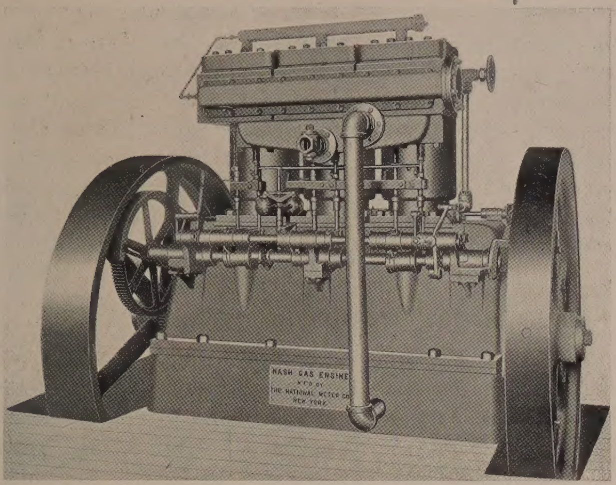
During the process of perfecting this complete line of hoisting machinery, the Elektron force has always had in mind that felicitous wish for its apparatus, "a long life and a happy one." They are confident that this has been assured by careful and substantial construction on the one hand and a perfection and simplicity in the design of controller systems on the other, that eliminates interruptions to service.

The systematic pursuit of this ambition has been made possible through the fact that from general manager down to department foremen, the same men are now in charge of the engineering and manufacturing of this machinery that were with the business when it started some fifteen years ago; and that it has been attained, so far as is possible, can be attested by reference to all of the users of Elektron machinery instead of by reference to a selected few, who have been so fortunate as to have "show plants."

Attention is particularly called to a custom of the Elektron Co. shown in its elevator proposals, which no other similar concern has adopted, that of submitting a detailed specification of its winding machines in conjunction with the general specification for the complete elevator plant. Such important points as the dimensions of the drum shafts and bearings, pedestals, gearing, worms and worm shafts, thrust bearings, brake mechanisms and motor parts are given in detail, as well as the sizes of bolts, screws, etc., used in assembling them. The purpose of this detailed specification is to invite comparison with apparatus of other makes, in proof of the claims for exceptionally substantial and massive construction.

The same methods which have produced the Elektron hoisting machinery have been carried into the designing and construction of its safety attachments, with the result that they have secured the approval of every engineer and inspector who has ever been called to pass upon them, and have stood the test of time without failure. The line of Elektron devices of this kind is unusually complete.

The important feature of high grade work "at the building" has been given careful study, with the result that attached to each selling office of the company, there is a competent corps of mechanics, who have installed the Elektron apparatus in such a way as to make the reputation of the completed plants in thorough harmony with that of the factory product. The New York office is at 156 Fifth Avenue.



NATIONAL METER COMPANY, 84 & 86 CHAMBERS STREET, NEW YORK.

OUR illustration shows a Nash Gas Engine of 125 actual horse power capacity. It is of the vertical three-cylinder enclosed type with main bearings and other working parts self-oiling and protected from dust. These engines are very compact; the vertical frame gives great strength and transmits the working strains directly to the foundation while the use of three cylinders gives a regularity to the impulses on the crank shaft that is desirable for steady speed and smooth action. A special fly-ball governor, that is very sensitive, closely regulates speed by controlling the gas supply according to the load. Each cylinder is governed independently of the others. It will be noted that the valve motion is simple, external to the engine and convenient for the operator.

Engines of 40 horse power and upward are of the three-cylinder form, those of 15 to 30 horse power have two cylinders and those from 3 to 10 horse power have one cylinder. The vertical frame and self-oiling features are used for all sizes, the same general design being preserved throughout. In developing the Nash Engines, special attention has been given to adapt them to suit the requirements of electric lighting, pumping and power plants where close regulation in speed, high economy and durability are called for in combination with simplicity and ease of handling. That these requirements have been fully met, is shown by the large number of Nash Gas and Gasoline Engines that are now successfully operating electric lighting plants for city and country service. For country houses Nash Direct-connected Gasoline Engines have generally been used but there are many others of the belted type. Altogether they cover a great range of sizes and include some of the finest installations that are in service anywhere, producing light unsurpassed in quality at moderate cost with a minimum of attention, and are highly satisfactory to their owners. Such plants are much more convenient and appropriate for country houses than steam outfits would be, and their introduction has solved the problem of electric lighting of this character, as owners and architects will appreciate.

Another very important and interesting application of Nash Gasoline Engines, has been to operate triplex pumps for the water supply of country houses, either in combination with the electric lighting, or by means of a separate pumping outfit. These plants may be arranged of proper capacity to take care of the ordinary domestic service, pumping to an elevated tank, which they do very economically, and also, so as to serve as fire pumps to deliver heavy fire streams, should occasion arise. The outfits are always ready for service, day or night, and may be started at a moment's notice when the alarm is given. Pumping plants like these reduce the fire risk and are of incalculable benefit in protecting country homes against fire.

THE FINISHING TOUCHES.

EACH YEAR sees better architectural work in America, and each year the architect increases in importance. He not only designs the structure, but, when he does not actually plan the interior decorations, he is called upon to make suggestions for them. This is as it should be. The time spent in designing charming interiors is thrown away if the owner is allowed to violate the canons of taste in the selection of decorations. This widening of the field of the architect has been particularly felt by the manufacturers of Lincrusta-Walton. For hotels, clubs and public buildings it is unequaled, and it can often be used to good effect in keeping the cost of a house within the limits set by a patron, without diminishing the beauty of the house. A wainscot of Lincrusta-Walton is practically as durable as one of oak. For stairways it is an ideal wainscot. On upper walls it takes the appearance of carved wood, panels, carved ivory, hand-tooled leather, and other more expensive treatments.

Lincrusta-Walton is a water-proof composition, the ingredients of which are entirely harmless. This composition is firm but flexible, and the designs are brought out on its surface in clear relief (not hollow in the back) by means of a heavy pressure applied by rollers.

"Solid Relief Material" was for many years obtainable only in the uncolored, natural state, but Fr. Beck & Co. are now furnishing it, when desired, decorated in colors so that all that is necessary is to put it on the walls. A catalogue is also issued, containing hundreds of illustrations of the patterns in which Lincrusta-Walton may be obtained, together with illustrations of decorations particularly designed for special purposes—wainscots, stairways, ceilings, dados and friezes, center rosettes and small architectural details. It can be decorated, re-decorated and painted in any colors by your own decorator as often as desired after it is hung on the walls. Catalogue, price list and all other information upon application to Fr. Beck & Co., 29th Street and 7th avenue, New York City.

SOUND-PROOFING TESTS.

PROF. Norton, of the Massachusetts Institute of Technology, made a series of exhaustive tests for sound-proofing the partitions of the studios of the New England Conservatory of Music, last year, and his report has now been published in pamphlet form (having previously appeared in *Insurance Engineering* and several of the leading architectural journals) together with photographic reproductions showing how the partitions were constructed, acting upon Prof. Norton's results. The partitions were all lined with Cabot's Deafening "Quilt," in accordance with Prof. Norton's report that this material was far superior to any other sound-proofing, and the results in the finished building are entirely satisfactory. As it is the most difficult kind of building to make sound-proof, no higher tribute could be paid to the efficiency of this well-known deadener, which is the first thing for the purpose to be constructed upon scientific lines, and to combine efficiency with freedom from delay, and uninflammability.

Hanover Bank Building, New York. J. B. Baker, Architect.
C. T. Wills, Builder.
Johnston Livingston, Jr. & Co., Electrical Contractors.

JOHNSTON LIVINGSTON, Jr. & CO.

A RECENT announcement of interest was that of the transfer and sale of the Electrical Construction Department of the United Engineering and Contracting Company to Mr. Johnston Livingston, Jr., the transfer including all electrical contracts on the books of the company and all the stock, plant, good will, etc. Mr. Livingston had been in charge of the electrical department from its inception several years ago, and has formed a partnership with Mr. Albin Gustafson, the superintendent of the same department, and who has been well and favorably known for many years in the electrical trade in this city. They will continue the business of electrical installation of all kinds,—complete electrical and power plants for business buildings, industrial establishments, private houses, telephone and signal systems, and electric wiring of every description.

Among the many important contracts of this firm are the complete electrical equipment of the Hanover Bank Building, a photograph of which is shown above; the annex to the Imperial Hotel, together with a large new plant for the entire structure; the Brooklyn Eagle Building; the new addition to the Racquet and Tennis Club; a complete lighting installation for Governor's Island, New York Harbor; Young Men's Christian Association, Twenty-third Street Branch and West Side Branch; City Club; Ethical Culture Society Building; Singer Building; Western Electrical Instrument Company's Factory; new wing Metropolitan Museum of Art; and many large private houses in both town and country. They make a special feature of isolated electric plants for country houses, having proved that in point of convenience, economy, and all-around usefulness, not only for illumination, but for power purposes and water supply, they are unequaled by any other method of supplying these requirements.

BRIDGEPORT WOOD FINISHING COMPANY.

AS ALL architects are aware, the Wheeler Patent Wood Filler has been the standard article in this line for many years, and they are in the habit of specifying it because it brings out the full life and beauty of the wood, and its mineral base which is crystal rock silex permanently holds up the finish over it, and does not permit it to shrink and pit, as is the case when other inferior wood fillers are used. Architects are not so familiar with the Breinig's Lithogen Silicate Paint and Lithogen White Lead also sold by the manufacturers of the Wheeler Filler. These articles have been sold by them for many years, and are very much more durable than pure white lead, also more economical for the consumer at first cost owing to their greater covering capacity. The life of all paint is the oil, and where pure lead is used the acid of the lead, before the paint has been on very long, destroys the oil, and the paint comes off. Breinig's Lithogen Silicate Paint and Lithogen White Lead are composed of about one-third each of pure lead, zinc, and their specially prepared silex, ground in strictly pure linseed oil.

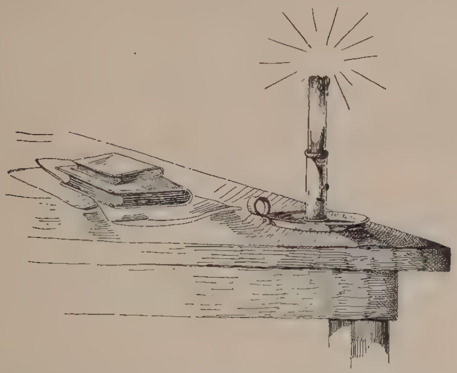
For finishing floors there is no better process than to first fill with the Wheeler Wood Filler and then give a coat of shellac or Breinig's Floor Varnish, and wipe over with Breinig's Floor Polish.

The Bridgeport Wood Finishing Company, of New Milford, Conn., New York, Chicago and Philadelphia would be glad to give architects full information, also furnish samples of various finishes, such as golden oak, flemish oak, weathered oak, etc.

ELEVATORS FOR PRIVATE RESIDENCES.

PERHAPS the most important step this year, speaking from an architectural standpoint, is the growth of the notion of installing automatic electric elevators in private residences. This idea is so rapidly becoming rooted in the minds of the people that new houses of any pretention are being thus equipped, and many older houses are being altered, so as to include elevators. Indeed, it is becoming the rule in high-class dwellings to install more than one. An automatic electric dumb waiter is now quite generally included. The larger mansions are being equipped with a separate automatic elevator for the servants; and the limit is not yet. In the fine private residence now being erected on Madison Avenue, for Capt. J. R. DeLamar, there are to be no less than five elevators. So far, the best device for residences is that perfected by the Otis Elevator Company, New York office, 71 Broadway.

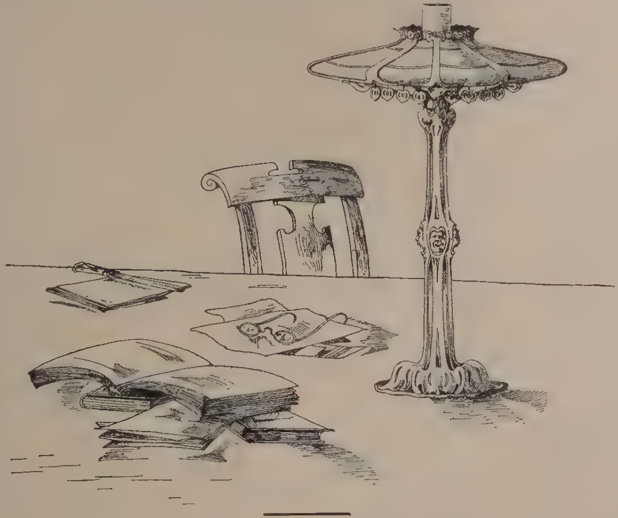
The action of the Otis Automatic Electric Elevator is so simple that a child can operate it. On each floor is a single push button at the landing, and in the car is a row of push buttons, one for each floor. The car responds to the pressing of a button by coming to the floor and stopping itself there. Until it has stopped, the door is locked and the only door unlocked is the one at which the car is at rest. Upon entering the car and closing the door, pressing one of the buttons causes the car to proceed to the corresponding floor and stop there, releasing the door for your exit. Until you have passed out and closed the door again, the car will not respond to any interfering call. The current may be derived from any lighting circuit and the current consumption is very slight.



"A meagre light, say you? I' faith, milord, 'tis that.
Yet, should the King himself so honour us, we have no better."

IN Shakespeare's time house-holders looked to the tallow-chandler for illumination, in whose dingy shop, a seething mass of animal fat was slowly wrought into tallow dips. In these days, well-trained artisans bring quickly into existence such convenient and efficient lighting instruments as were then undreamed of—representing the best forms of ancient and modern lighting, strictly correct in detail.

Where science reaches its high goal in a perfect light, the Oxley-Enos Company demonstrates a great art in presenting that light through the tone and medium of fine fixtures, adapted to every purpose and condition. The showrooms at 371 Fifth Avenue, New York, are replete with exhibits of their products.



"RUFUS, THE ROOFER," SAYS:

"THERE is one thing you ought to know, by now, and that is that you've got to treat even good tin respectful like. I've seen some metal workers use a heavy coated terne plate in a way that would make a macadamized road shrink up.

"When your tin roof is down keep off it as much as possible. A tin roof is not a driveway for speeding steam shovels on; neither is it a place to try hobnailed boots.

"Don't let the masons dump brick and mortar on it, or the carpenters throw planks with nails in them upon it; that is, if you want a good tin roof.

"You've got to use a roof as well as a tin roof should be used if you want a good roof, no matter what tin you put upon it. The man that expects a tin roof to take anything that comes along in the way of rough usage while the roof is going on, would use a grand piano to keep his potatoes in, and then wonder why it did not sound well.

"The better the tin, the better care you should give it putting it on. A good roofing paper should go under every tin. Use the best solder you can get, and paint the tin as soon as it is laid. It doesn't do any tin good to paint the rust that has settled on it over night.

"You want to do all of the things, but you want to be sure first that your tin is 'Taylor Old Style.'

"There are some architects and builders who have an idea that there are a good many 'Taylor Old Styles,' or, at least a good many tins like it. They do not come right out square and say 'Taylor Old Style'; they say, 'Taylor Old Style,' or 'equal' or 'an extra heavy roofing terne,' or 'an old-style, hand-dipped tin.' They beat about the bush and in the end they do not get anything just as good. It is always best to have the name with you. You cannot get away from the name."—In the June *Arrow*, published by N. & G. Taylor Co., Manufacturers of Tin Plate, Philadelphia.

"IMPROVED SHIELD" CEMENT.

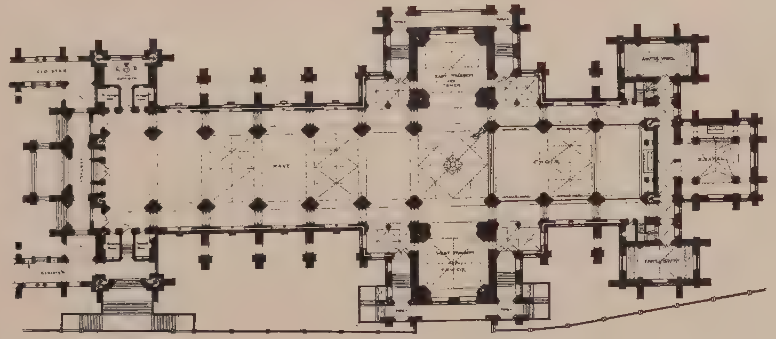
TO MEET a popular demand for good cement to be used in work not requiring a Portland cement, and for which an ordinary Natural cement will not answer, The Lawrence Cement Co., of Pennsylvania, manufacture a cement known on the market as "Improved Shield." This brand has been used since 1890 by the largest builders and engineers in the country, and has always given entire satisfaction. In the manufacture of "Improved Shield" cement, the greatest care has been exercised and the closest attention given in minute details, so that on every point it exceeds the requirements of the American Society of Civil Engineers. In many classes of work it affords better results than some brands of Portland cement. "Improved Shield" is especially adapted for making concrete, and can be relied upon to attain great strength and become uniformly harder with age. There is no natural cement yet known to the trade that has a larger sand carrying capacity than "Improved Shield." Main office, 1 Broadway, New York.

THE KELSEY GENERATOR STANDS BY ITSELF.

THE Kelsey Heating Co., whose home office is at Syracuse, N. Y., are makers of the Kelsey Warm Air Generator. This heating apparatus was first placed on the market in 1889, and since that time over 23,000 have been sold, principally for use in the residences, churches and school buildings in all parts of the country. It is a pleasing fact that every year as the heaters have become better known the sales have increased.

In construction, arrangement and method of warming and distributing the air the Kelsey generator is unlike any other heater in existence. The makers claim that certain results are accomplished with the Kelsey that are impossible with any other construction. Among these may be noted the sending of warm air in

(Continued page 90.)



LIVERPOOL CATHEDRAL

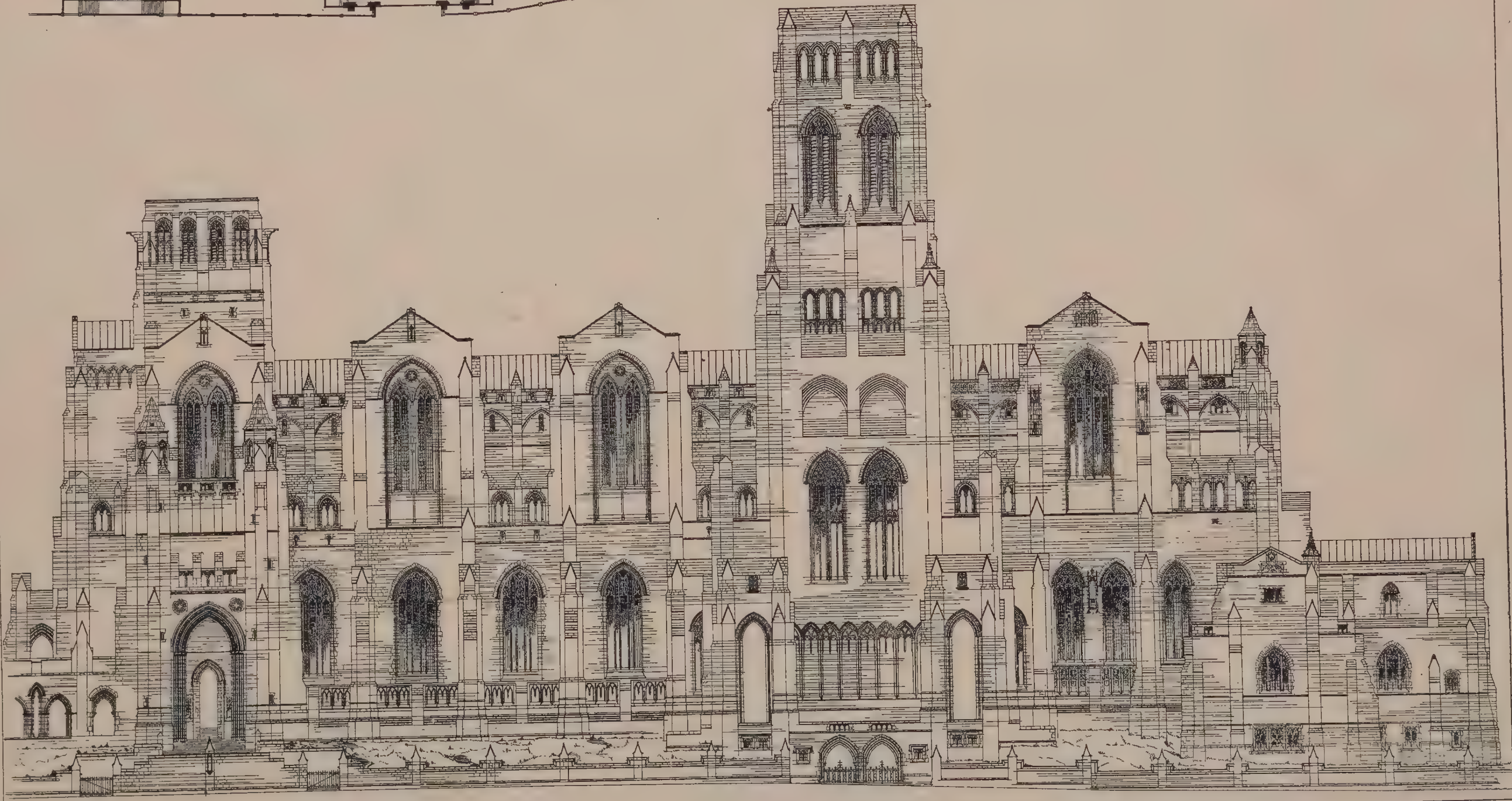
: LONGITUDINAL ELEVATION FACING WEST :

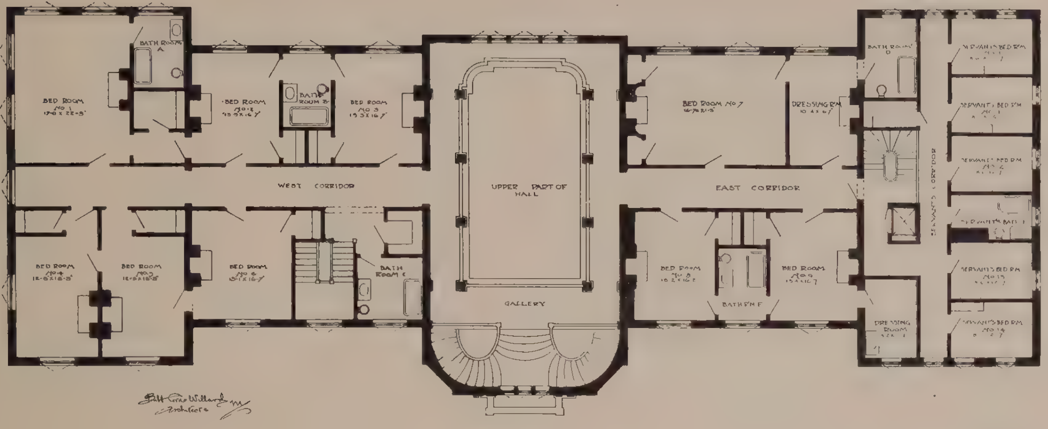
10 0 10 20 30 40 50 60 70 80 90 100

Scale of feet

DESIGN PLACED FIRST BY MESSRS NORMAN SHAW & G. F. BODLEY, THE ASSESSORS.

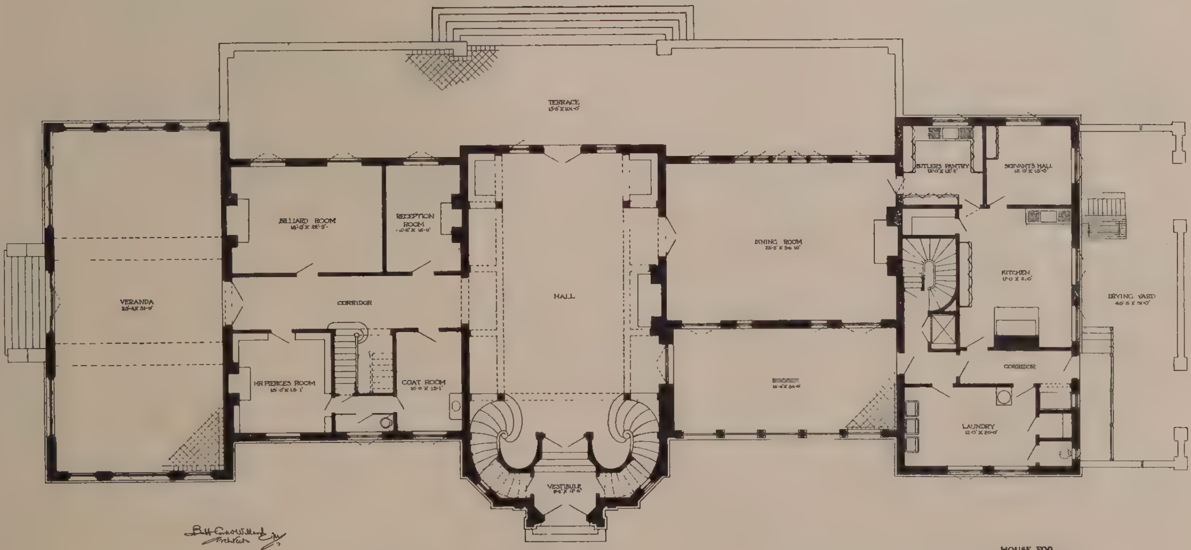
GEO. GILBERT SCOTT, ARCHITECT.





SECOND FLOOR·PLAN

HOUSE FOR
WINSLOW S PIERCE ESQ
BAYVILLE L I



·FIRST FLOOR PLAN·

HOUSE FOR
WINSLOW S PIERCE ESQ
BAYVILLE L I

PLANS, COUNTRY HOUSE, WINSLOW S. PIERCE, BAYVILLE, L. I. Babb, Cook & Willard, Architects.

Wrought Iron Stair Rail, Residence, W. H. Bliss, 6 East 65th St., New York.
Hiss & Weekes, Architects.
Executed by the Wm. H. Jackson Company, New York.

(Continued from page 87.)

any direction to exposed or distant rooms, warming the air properly and enough for heat and ventilation, uniformity of heating, whereby an even temperature is maintained and all with the economical use of fuel.

The Kelsey Co. had exhibits at both the Columbian and Pan-American expositions and captured the highest awards. The company has an office in New York at No. 156 Fifth Avenue, in charge of L. V. Sanford. The western selling agents are Cook & Van Evera Co., Nos. 38-40 East Lake Street, Chicago. The James Smart Mfg. Co., Brockville, Ont., is the exclusive maker and distributor of the Kelsey generator for Canada. Six hundred dealers in all of the principal cities of the country are now selling to the consumer.

HEATING, VENTILATING AND COOLING OF APARTMENT HOUSES.

THE latest step in the improvement of apartment houses for the convenience of flat dwellers is the introduction of a mechanical system for heating, ventilating and cooling. Such a system has been designed and made practically possible by the Buffalo Forge Company, Buffalo, N. Y., who are engineers and manufacturers of Fan System Apparatus for public buildings, factories, schools, etc. This firm has recently been working in conjunction with the architects to furnish a system adapted to apartment houses, which may be used in winter for heat and ventilation, the latter having been hitherto conspicuous by its absence, and in summer for ventilation and cooling. Their success has been considerable, as by means of flues built in the walls, air at a moderate temperature is propelled by a fan into each suite of apartments, and supplements a direct steam system of heating, while affording ample ventilation. In summer the temperature on excessively warm days is reduced ten to twenty degrees by using city water as a cooling medium.

The fan and heater are placed in the basement of the flat building and, preferably, run by small motor, the power being very light. As so far installed, the warm air is delivered only to two or three of the principal rooms in each suite, but by means of open doors, etc., the ventilation afforded the entire apartment is quite thorough. Each tenant has the means of regulating the temperature and air supply by registers in the outlets.

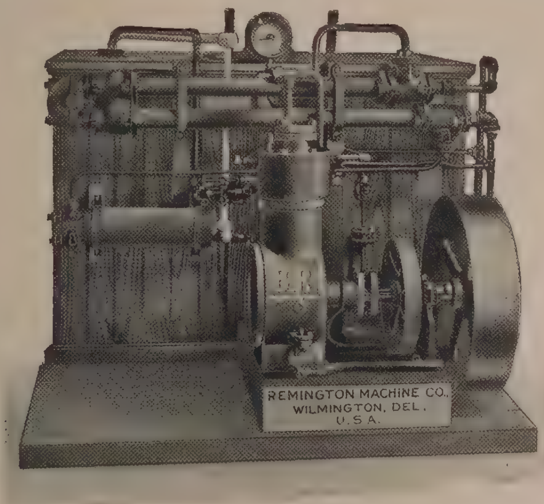
Other interesting special applications of Fan System Apparatus made by this firm for various descriptions of buildings are continually under way, and architects are invited to correspond with them if interested in the subject.

HART & CROUSE, UTICA, N. Y.

THE heating and ventilation of the modern building is a matter of considerable importance, and in order to insure best results it is necessary that careful consideration should be given to the selection of the various parts of the apparatus. The heater, the most important part, should be constructed of cast iron, sectional in form, with separate manifolds and screwed joints on the outside in plain view and accessible at all times. There should be no joints on the inside or between the sections exposed to the action of the fire or heated gases. The heating surfaces should be largely vertical, easy of access for cleaning and almost self-cleaning. The fire travel should be horizontal, with a down draft, in order to be efficient and economical. The heater should be tested to a cold water pressure of from 80 to 100 pounds in order to enable it to withstand rough usage and neglect, without damage. "The Royal Heater," manufactured by Hart & Crouse Co., New York, Utica and Chicago, possesses these features to such a marked degree that it has been selected for the heating of over twenty thousand of the best buildings in different sections of the country, giving to the owners a feeling of satisfaction, assurance and merited dependence, which could be obtained in no other construction. Next to the heater, the radiators form the most important part in the heating of a building, and in the "New York Radiators," the latest and most improved construction, with a pleasing design of ornamentation, or smooth surfaces, in one, two, three and four column widths, of the same design and measurement and all heights, the architect and owner can obtain in a superior construction, radiators to suit all styles of architecture and all locations.

B. R. ICE MACHINE.

B. R. means *Baby Remington*, the most complete and satisfactory small ice-making machine on the market. The name *Remington* on an Ice-making or Refrigerating Machine is a *guarantee* that it will be exactly as represented by the manufacturers. We are the pioneers in the small ice-machine business The *Remington* machines have a world-wide reputation, and are now in use in almost every country in the world where ice is a necessity.



The B. R. machine and outfit, as shown in the illustration, is of new design to meet the demand for a machine of smaller capacity than we have heretofore built. It has been thoroughly tested under most severe conditious, and found to do more than we claim for it.

The outfit consists of the ammonia compressor, condenser, freezing box provided with expansion cells, and ice cans holding from ten to twelve pounds each, erected on one base, and connected together with valves and fixtures, making a *complete ice-making outfit* ready for belt, and in this manner crated and shipped. The freezing box has a small cold-storage compartment under a separate cover for the preservation of a small amount of provisions or other goods.

A flask of pure anhydrous ammonia containing about twenty pounds is furnished with each machine, which will last for several years' operation, only about three pounds being required to charge the machine.

Full instructions will be furnished with each machine. Send for our general catalogue if you are interested. Remington Machine Co., Wilmington, Del.

"KOLL'S PATENT" LOCK-JOINT STAVED COLUMNS.

HARTMANN Bros. Mfg. Co., Mount Vernon, N. Y., report a steadily increasing demand for their very popular porch columns and in consequence have been compelled to enlarge their plant during the past year, having added over 8,000 square feet of floor space. To avoid the delay incident to securing the ornamental caps frequently furnished by them to be used with their columns, they have equipped a complete department for the production of this work.

The columns furnished by this company for the Allenhurst Club, Allenhurst, N. J., are believed to be the largest "Lock-Joint Columns" ever built, being 40½″ diameter, 34′ long, fluted the entire length, flutes being 4″ in diameter. The special machines devised by this company for the manufacture of the "Koll Column" permits them to make shafts of these dimensions with as great accuracy and of great detail as the smaller sizes and at a moderate cost. One of the largest orders ever filled for exterior columns was recently delivered to John A. McCall's Residence, Long Branch, N. J., over five car loads of the following dimensions being supplied: 20—36″ diameter, 42—20″ diameter, 32—16″ diameter, 2—24″ diameter. They have recently opened an office in the Townsend Building, 1123 Broadway, for the convenience of their local trade.

ROSENDALE CEMENT.

OF all modern building materials, cement is one of the greatest importance. Cement manufacturing was begun in America in Ulster County, New York, in about 1836, and since that time the mills in this region have turned out a total product of nearly 100,000,000 barrels. This dark-colored, or Rosendale cement, has been used in many of the most important structures in the country. The Brooklyn Bridge, the Waldorf-Astoria Hotel, the New York Central Tunnel and the foundation for the Statue of Liberty are some of the most noted examples. Most of the older buildings and such public works as reservoirs, pavements, etc., in all Eastern and Southern cities have been constructed almost entirely of the Ulster County Rosendale Cement. It is being used on the Weston Aqueduct, which is to supply the City of Boston; the Newark Storage Reservoir; the elevation of the tracks of the New York, New Haven & Hartford Railroad, at Bridgeport, Conn., and Fall River; all the buildings erected by the George A. Fuller Co., and the Thompson-Starrett Company in New York City and on hundreds of buildings in the East and South.

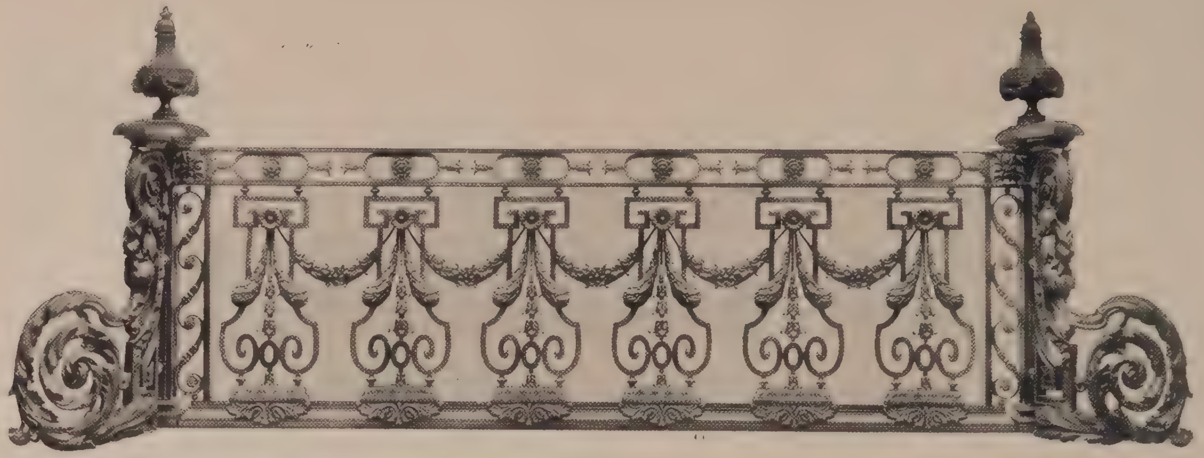
It is interesting to note that forty of Uncle Sam's forts along the Atlantic Coast have been built of this same material.

On account of its cost, which is less than fifty per cent. of that of Portland cement, the use of Rosendale has saved thousands of dollars to the owners of large pieces of work.

At the present time, nearly all of the Ulster County mills are operated by the Consolidated Rosendale Cement Company, which makes such well known brands as "Beach," "Norton," "Hoffman," "Brooklyn Bridge," "Newark-Rosendale" and "XXX." The company has a large central office at 26 Cortlandt Street, New York.

AMERICAN LUXFER PRISMS.

THE latest thing in skylights is the 13″ Square Special Skylight Prism, manufactured by the American Luxfer Prism Co. It represents perfection in the development of the prismatic



Bronze Balcony Rail, Residence, H. M. Flagler, Palm Beach, Fla. Carrere & Hastings, Architects. Executed by the Wm. H. Jackson Company, New York.

treatment of skylights. This large prism is ¾″ thick and is accepted by the New York Board of Fire Underwriters. Skylights equipped with these Luxfer Special Skylight Prisms are guaranteed not to leak.

The unquestionable usefulness of Luxfer Prisms in securing daylight illumination for premises and rooms otherwise dark, is at least appreciated by the architects who have become accustomed to specifying the product in their buildings. Almost every building being erected in New York City to-day is making use of the wonderful qualities and powers of Luxfer Prisms. They should be used even more extensively, because no owner will object to having his basement as bright and cheerful as his main floor, and no architect is justified in planning his building with a light shaft when he can secure better results by using Luxfer Prisms in the front and rear, thereby gaining the added floor space and the reduced fire risk.

The same company also manufactures a fire-proof window that is suitable for the highest grade office buildings and elevator enclosures. It is made of best quality Polished Plate Glass, Copper Electro-glazed in 4″ squares, and is accepted by the Underwriters as the equivalent of wire glass. The new Wanamaker building has several thousand square feet of Luxfer Fire-Proof Windows specified for the elevator shafts. Architects should send for circulars giving full particulars of all the products manufactured by the American Luxfer Prism Co., 160 Fifth Avenue, New York.

ART CERAMIC MOSAIC.

ARCHITECTS, notably those of the latter day, appreciate the fact that the beautiful and artistic are becoming the general order of the age. Americans are becoming intuitively artistic, and it cannot be denied if we but look around us. To foster and stimulate and to keep apace with this propensity, the American Encaustic Tiling Company, Limited, have entered upon a new field of floor and wall decoration which is deserving of the attention of every one be he architect or layman. It will, however, appeal more strongly to the architect, owing to the immense scope of application.

As examples of this beautiful product, we direct attention to the facade of Hicks' Fruit Store, No. 1179 Broadway, New York; The Sharp Shooter in heroic size in the Schuetzen Park, Union Hill, N. J.; Proctor's Fifth Avenue Theatre; Hegeman's Drug Stores; Hillcrest Apartment, 116th Street and Amsterdam Avenue. It will also be used in all the Subway Stations. These are but a few of their exemplary work, and the demand is constantly growing in all quarters of the United States indicating that there is a new epoch in floor and wall covering, not soon to be outlived. As a thing of beauty is a joy forever, Art Ceramic Mosaic has come to stay.

A particularly fine specimen, embodying figure and ornamental scroll work with exceptional color scheme, can be seen in the entrance vestibule leading to the offices of the American Encaustic Tiling Company, Limited, in the Townsend Building, No. 1123 Broadway, Corner 25th Street, New York City.

WILKE REFRIGERATORS.

THE safe, economical and healthful preservation of food is one of the most important subjects occupying the housekeeper's attention. To insist on supplies that are fresh, clean and sweet, and then to store them in a box of soggy, decaying wood and corroding metal under the influence of germ life, is not consistent. Yet "that disagreeable odor" in the ordinary refrigerator is positive proof of corruption.

Wilke refrigerators are lined throughout, *includimg ice chamber*, with half-inch plate glass set in water-proof cement, or white glazed tile laid under Wilke patents. Glass and tile are absolutely non-corrosive, and incapable of absorbing odors or moisture.

These refrigerators are fitted with removable ice pans and drains. Drain is also equipped with patent trap, and is readily accessible for cleansing. The external finish is of white glazed tile, bound and trimmed with nickel-plated wrought brass, or solid paneled oak, hand polished, with wrought brass hardware.

There is absolutely nothing to corrode. The walls are heavily insulated with mineral wool, the most perfect insulator known, besides double courses of special air-proof, water-proof insulating sheathing.

Wilke refrigerators are made in six models, ten sizes, three external finishes. The Wilke Manufacturing Company makes a specialty of built-to-order work, and will submit designs and suggestions for refrigerators for apartments, hotels, clubs, institutions or private residences. Factory, Anderson, Ind. New York salesroom, 24 East 22d Street.

THE "PERFECT JOINT" COLUMN.

ARCHITECTS are continually deluged with circulars, samples and descriptions of new devices and methods, a few of which seem to embody a good idea, while the majority possess no new practical value. Occasionally a device is produced or a new method of construction, which by virtue of merit seems to forge its own way into popular use, and its superiority becomes universally recognized. Such is the history of the "Perfect Joint" Colonial column. First constructed about three years ago, this column has rapidly gained the attention of architects and builders throughout the Eastern and Southern States, and now has become a standard of excellence in idea and execution. With properly kiln-dried material there can be no season checks, and the danger of the columns opening at the joints is eliminated by the manner in which the edges of the staves are joined. The staves are so fashioned that they fit into each other with three tongues and grooves with surfaces so disposed that the glue surfaces must, in case of failure, slide on each other instead of separating at right angles. This gives the glued surfaces even greater strength than the body wood. The Doane & Jones Lumber Company of Elmira, New York, who make the "Perfect Joint" column, are prepared to make columns of any size from six to thirty-six inches in diameter and up to twenty-eight feet in length, and of any kind of wood desired for exterior or interior use. Their increased use by architects is desired. All details are carefully followed.

FIRE-PROOF DOORS.

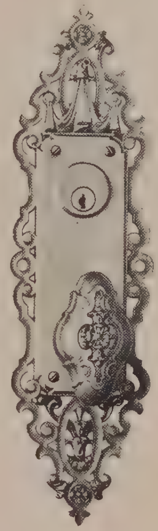
THE attention of architects has recently been directed to the Richardson Seamless Fire-proof Door, manufactured by the J. F. Blanchard Co., offices, 819 Fuller Building, New York. This door occupies an exclusive position with the New York Fire Insurance Exchange, they having accorded to it alone the minimum standard rate for use in elevator shafts, staircase halls and all interior partitions, securing to owners and tenants a considerable saving, as all other metal covered doors, except the unsightly tin covered work, entails a charge above the minimum rate on both building and contents. In view of the well known conservative tendency of the Exchange, it would seem that their position in the matter can be accepted by architects as conclusive evidence of the character of the work of the Blanchard Company.

The metal used in constructing the Richardson Door is ordinarily twenty-six gauge steel. Each side is a single sheet, the paneling being formed by Expansion under hydraulic pressure. These sheets are attached to the wood core by a continuous heavy steel band on the edge, the two face sheets lapping underneath. Asbestos is placed between the metal and the wood core, and the metal being applied with cement and under pressure, prevents any buckling or wavy surfaces.

The Richardson Door is well adapted for all high-grade work, and meets the increasing demand for a first-class article in this line. The company is prepared to supply the work in handsome duplex electro copper plated finish, or in plain steel for painting; also in copper or bronze, oxidized to any color.

FRITTS REFRIGERATOR CONSTRUCTION CO.

THE Fritts Refrigerator Construction Co., with office and salesroom at 150 Fifth Avenue, corner Twentieth Street, New York, do all kinds of refrigerator work for either ice or brine system. This concern makes a specialty of high grade refrigerator work for private houses, hotels, hospitals, clubs, etc. They have their own factory in the city, and build just what is wanted at short notice. Their system is new, and includes several improvements and patents which are the invention of Mr. A. D. Fritts, the head of the firm. They do not manufacture for the trade, and, by selling direct, are able to compete in price with ordinary makes. They apply white porcelain, glass and tiles as an inside lining and outside finish in the most improved manner. Their work is indorsed by leading architects, and has many points of superiority over other makes. They carry sample refrigerators in stock, but do not attempt to have ready made everything that may be wanted, as their specialty is to build to order, for which they make no extra charge. They have installed a large amount of work in the Atlantic and New England States, which includes work for Miss Helen M. Gould, Col. Daniel S. Lamont, Harley T. Proctor, William H. Moore, Edwin Hawley, F. B. Pratt, Ira A. Kip, Jr., William H. Baldwin, Jr., Francis S. Kinney, yacht "Corsair," the Hotel Essex, and the German Hospital, New York City.



THOUGHTS ON BUILDERS' HARDWARE.

IN THE ornamentation of hardware as well as in the decoration of other parts of a building, care should be taken not to overdo. There should be a motive to the design—the simpler—the better and that motive accentuated by bolder relief or plained surfaces. Hardware with the woodwork, being a fixture and part of the building, should be treated architecturally, as well as decoratively.

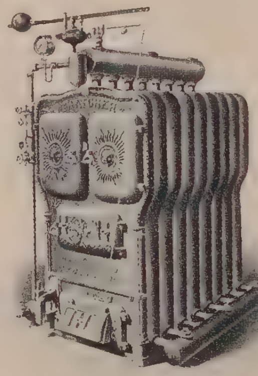
The accompanying engraving, an Elizabethan design, will serve as an example; while its detail of scrolls, strap work, festoons and leaf work are contained in Flemish and German renaissance, it is free from any detail peculiar to those styles which would prevent its use on Elizabethan work, or vice versa. Quite frequently in office buildings, or for other public work there is a demand for simple but strongly marked and massive escutcheons; not too ornate nor a plain piece of bronze metal. Then the use of an escutcheon with ornamental border adding a monogram or seal, would be strictly in accordance with the requirements, and in the best of taste.—Russell & Erwin Manufacturing Company.

PLAIN AND ORNAMENTAL FRONT BRICK.

THE Kreischer Brick Manufacturing Co., with offices and sample rooms at 119 East 23d Street, New York City, with an up-to-date plant situated on Staten Island, are in position to fill contracts on the shortest possible notice acceptable to manufacturers of brick. Their specialty is Plain and Ornamental Front Brick of standard size, Roman size and Norman size, in all shades, and Fire Brick in all shapes and sizes of the very highest grades.

The fact that their plant is situated in Greater New York and that the company controls its own methods of transporting material, which is done by steam lighters, avoids all danger of delay by railroads and causes connected therewith, such as arose during the recent coal strike. The company's policy is always to carry a large stock of material on hand, which has made it possible to fill orders for quick delivery on twenty-four hours' notice.

They also manufacture a Patent Paving Block of special design, which has met with general approval, samples of which will be submitted upon application.



"THATCHER" HEATING APPARATUS.

AN EXPERIENCE of over fifty-three years in manufacturing high-grade heating apparatus has established the name "Thatcher," in connection with furnaces, ranges, steam and hot water heaters as a guarantee for the highest grade and most reliable goods.

They have maintained a modern foundry equipment for this class of work and as it is perfectly devised and managed under their personal supervision, it has offered this company a broad field of observation and experience which has enabled them to gradually eliminate many of the defects, both scientific and mechanical which are more closely identified with other goods less improved. Their rapidly increasing business has obliged them within the last two months to make large additions to their works in all departments and they now have unsurpassed facilities for turning out their product. For hot air heating their line consists of the Thatcher Tubular, Winner, Scorcher, Meteor and Active Furnaces. They also manufacture a Combination Heater for hot air and hot water heating. The Thatcher steam and hot water heaters are noted for their beauty in design and great efficiency and economy in operation. They are made in the widest possible range of styles and sizes and are conservatively rated. This company also makes a most complete line of Cooking Ranges which have all modern improvements.

A catalogue including illustrations and testimonials together with other valuable information will be sent upon application.

STEEL ROLLING DOORS, SHUTTERS, ETC.

THE Kinnear Steel Rolling Doors and Shutters have through superior merits alone attained the highest possible standard of perfection. Very careful and prolonged study, together with vast experience, enable them to place on the market excellent constructions for every purpose where a Steel Rolling Door or Shutter can be applied.

Skilled workmanship, combined with the highest grade of material and ingenious ideas have here produced the best type of manufactured product.

Compact construction, durability and ease of operation combine features hitherto unattainable.

The Kinnear Manufacturing Company has its headquarters at Columbus, Ohio, with branch offices in Boston, Chicago and Philadelphia; being represented in New York by The Wm. H. Brodie Company, 45 Vesey Street.

LOBEL–ANDREWS COMPANY.

NOT as far back as twenty years ago, if it were desired to have a very fine pair of entrance doors in iron or bronze, or a high-class fence, stair railing, or marquee, it was necessary to have the same imported from France or Italy, or other continental country. To-day, however, we find that work can be made in this country which surpasses in artistic design and excellence of workmanship most of that produced in Europe.

Attention is called to the card of The Lobel–Andrews Company, of 531-533 West 55th Street, New York, who make a specialty of high-class bronze and iron work, such as entrance doors, marquees, front entrance gates and fences, stair work, elevator enclosures, etc., for office and public buildings and private residences.

This firm has recently completed the contract for the marquee which adorns the residence of Andrew Carnegie, Esq., at 92nd Street and Fifth Avenue, City, and also the bronze fences, ornamental window guards, etc., on the same building. All of the ornamental iron and bronze work in the Chamber of Commerce Building, on Liberty Street, New York, has been finished by them, as have also the bronze entrance and vestibule doors for the residence of E. T. Bedford, Esq., in Brooklyn, N. Y., which attracted very much attention and favorable comment at the Exhibition of the Architectural League held in New York City. They have also furnished the bronze balconies, grilles, etc., for the residence of George D. Pratt, Esq.; the home of the Republican Club; Martha Washington Hotel; Hotel Belleclaire; Residences of James A. Blair, Francis G. Lloyd, in New York City, and George W. Vanderbilt, at Biltmore, N. C., contain work in bronze and iron executed by this firm.

LIGNI-SALVOR—THE BEST WOOD PRESERVER.

FROM time immemorial, efforts have been made to protect articles of wood from the ravages of the weather, the deteriorating influences of the earth, climate and of microscopic organisms, so as to give them a longer period of serviceability than they would possess without the application of preservatives. Wood is probably used more extensively and in a greater variety of forms than any other material. It is liable to rot or decay from exposure to moisture or climatic influences. The annual loss and expense from this source is considerable. Carbolic acid, one of the strongest antiseptics known to modern science, combined with other substances, in such a manner as to enable its application to wood, is the long-sought, cheap and reliable preservative agent, and this combination has been discovered in Ligni-Salvor—Best Wood Preserver. (Registered.) With its antiseptic properties of the highest efficiency (containing about sixty per cent. of crude carbolic acid) which can be applied anywhere and by anybody on new or old woodwork exposed to moisture or climatic influences, either by painting with a brush, or soaking the wood to be preserved in it. It soaks into the wood readily, destroys the albuminous matter, which is the cause of rot and decay, leaves the pores open, permitting no dry rot to occur, as is the case when paint, tar or similar substances are used, and covers about 300 to 350 feet of dressed lumber per gallon.

This excellent wood preserver is of a bright nut-brown color, which is very attractive and produces a decidedly agreeable effect, and is always ready for use. Wm. Menzel & Son, Sole Agents, No. 68 Broad Street, New York, will be glad to furnish samples and all further information required.

NETHERY FLUSH VALVFS.

NETHERY Hydraulic Valves seem to constitute a very notable advance in the economics of water service in their application to closets, urinals, slop sinks, etc. We have been shown a certificate that on an eight months' installation of Nethery Flush Valves in the E. A. Cooper apartments in Indianapolis, Ind., a saving of 35 per cent. in the average meter bills for eight months was demonstrated, as against average bills on the old overhead tank service.

P. J. Andrews, Chief Inspector of Buildings, Borough of Manhattan, officially reports: "Nethery Flush Valves answer in every respect all requirements for proper flushing. They are simple in construction and not liable to get out of order. I recommend that they receive the approval of the Bureau of Buildings of the Borough of Manhattan."

Among recent and coming installations of Nethery Valves are the following: Hotel Potter, Santa Barbara, 196; Glenwood Hotel, Riverside, 107; Hampton-Terrace, North Augusta, 151; Hotel, Broadway and 57th Street, New York, 139; Hotel, Broadway and 55th Street, New York, 105; Alpha Realty Company, 15 East 60th Street, New York, 85; Ethical Culture Building, New York, 50; Butterick Publishing Company, New York, 150; Webster Apartment, New York, 75; Apartment at 141st Street and Seventh Avenue, New York, 35; Home for Aged Men, Brooklyn, N. Y., 35; Hotel, West 79th Street, New York, 105; Bessemer Building, Pittsburg, Pa., 50; Studio Building, 67th Street, New York, 50; City Club, New York, 35; Jail at St. Paul, Minn., 60; St. John's College, 90; Manhattan College, 85; Knickerbocker Hotel, 385; Hotel, Fifth Avenue and 57th Street, 400.

RICHEY, BROWNE & DONALD—LONG ISLAND CITY.

DURABILITY, more than any other quality, is the one which is required in buildings and building materials, and what is more enduring than granite and iron and bronze? We find the doors of the Pantheon at Rome swinging for 2000 years on the identical bronze pivots which were placed there at the beginning.

In the United States architects have come to the realization that these materials—iron and bronze—lend themselves readily to the highest degree of ornamentation, or are equally serviceable where plainness and simplicity are required.

In the great financial centers of the country the banks and trust companies' offices, the office buildings, the public edifices, the libraries, all present opportunities, in nearly all portions of their interior or exterior, for the use of iron, bronze and brass. Nor is it in the cities alone that this work is met with, but gates, railings etc., are found on all sides enclosing the gardens of our palatial country residences.

All this work requires, in order to bring it to its proper degree of perfection, the attention and care of skilled artisans from the time the preliminary or rudimentary drawings and ideas are sent out from the architect's office until the completed work is erected where the public eye may examine it at leisure. For many years such work has been produced from the works of Richey, Browne & Donald, Borden and Review avenues, Long Island City, N. Y. Here an expert corps of draughtsmen and designers is at work developing the plans of the architects and furnishing details for all portions of the work. The drawings are then issued to the patent shops, where modelers with European training are at work.

The blacksmith shops, the foundry, the plating plant, and all the various departments necessary to the most faithful and artistic culmination of contracts, large or small, are here found grouped methodically over an extensive plot of ground.

RIDER-ERICSSON ENGINES.

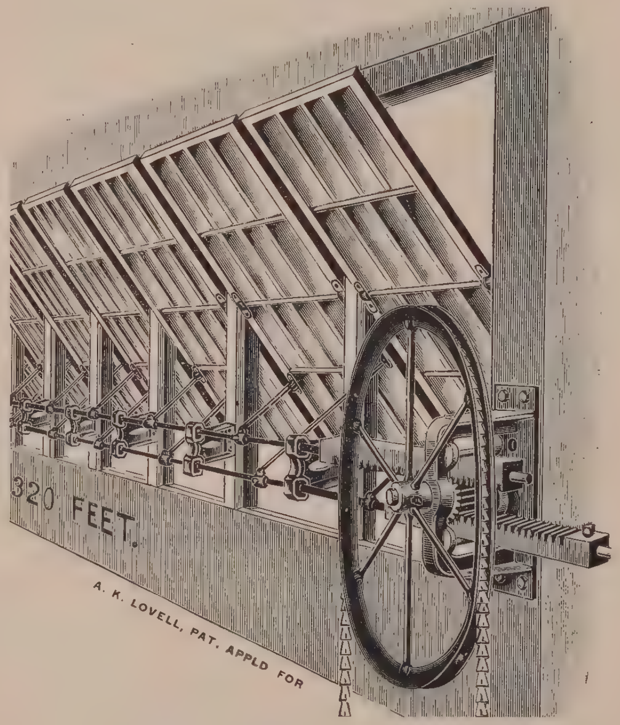
A SOMEWHAT unique feature has been introduced by the Rider-Ericsson Engine Company, 35 Warren Street, New York, by which they adapt certain sizes of their Ericsson Engines to pumping from both deep and shallow wells at the same time. This is an arrangement which is entirely novel and is used on no other pumping engine. The advantage of this in many cases is obvious, as it saves buying one engine. The Rider-Ericsson Engine Company illustrate this novel pump in their catalogue, which they send on application to any of their stores. The Rider and the Ericsson Engines have been on the market so long that it is unnecessary to dwell on their good points. Few architects in the United States and Canada are not familiar with them, many of them having become familiar with them when in college, as most of the colleges have the engines in their mechanical laboratories to instruct the students. For domestic pumping, where absolute safety is required and where there is no skilled labor employed, the Rider-Ericsson Engines have no equal.

CROWN SANITARY FLOORING

IS A cement put up in barrels and bags accompanied with liquid in glass, when mixed in equal proportion produces a mixture similar to a rich Portland cement and sharp sand, in equal parts. It is made in red or grey with sanitary base, if desired, which will meet the requirements exacted from a flooring that is constantly used; owing to its being fire-proof as well as non-absorbent, is equal to a good granolithic, or Terrazzo floor, as far as serviceability is concerned, and we believe better where a non-absorbent floor is required. A sample has been laid on the Brooklyn bridge, foot of staircase alongside of World building. This sample is one-half inch thickness, ten by twelve feet, and was thrown open for the public May 7th, this year. According to the engineer's statistics there are over 35,000 people daily passing over this sample. Also the main entrance of the Gouveneur hospital has been laid under test with flattering results. Robert A. Keasbey & Co., 100 North Moore Street, New York City, and 13 Terrace, Buffalo, N. Y.

SEDGWICK MACHINE WORKS.

THE fact that the Sedgwick Machine Works, No. 110 Liberty Street, New York, build and install Dumb Waiters and Hand Power Elevators of every description, which give better satisfaction than has been the case with outfits of other make, is becoming generally known. For many years architects who investigated this subject carefully, have known that by specifying the Sedgwick Machines, was equivalent to a guarantee that the work would be satisfactory. To-day in probably nine cases out of ten, of buildings erected for the occupancy of the owners, as well as for investment purposes (as opposed to speculative work), the goods of the Sedgwick Machine Works are used. The guarantee of the Sedgwick Machine Works is extremely broad, and as they manufacture Hand Power Dumb Waiters and Elevators only, they have necessarily brought their machines up to a state of excellence which is not attained by other firms who also install power work. By devoting their entire effort to the improvement of the Hand Power Dumb Waiters and Elevators, they have raised the standard of this class of work, and have developed various types of machines, each of which is designed to fill certain special requirements, so that by a judicious selection from their machines, each particular job may be fitted with the outfit which will best fulfill its special demands.


320 FEET.
A. K. LOVELL, PAT. APPLD FOR

THE G. DROUVÉ COMPANY, BRIDGEPORT, CONN.,

HAVE placed on the market a new device for operating sashes and shutters, called the Lovell apparatus, which is destined to revolutionize the business. With this apparatus a line of sash 500 feet long can be operated from one station if desired. It makes no difference what kind of sash is to be opened, the apparatus working equally well with sash hung from top, pivoted at the sides—or at top and bottom, or hinged at the bottom. It can also be applied to sliding or ordinary lifting windows. As the operating station for an entire building is, unless otherwise ordered, always placed on the wall at end or side of building, in case of fire the windows can be quickly closed while the people are leaving the building. This is a feature which will appeal at once to the owners of large factories and mills.

The B. F. Sturtevant Company of Boston have volunteered this indorsement: "Regarding our experience with the Lovell Window Opening Device in our new buildings at Readville, would say that the monitor windows in our foundry are equipped with this device and are operated with great ease and to our satisfaction. We know of no mechanism which enables the operator to move as many windows from a specified point as does this. We have a line of sash about 220 feet long which is thus operated."

"FAIRBANKS" RENEWABLE DISC VALVES.

ENLIGHTENED judgment in the selection of valves for steam or any purpose naturally compels the careful consideration of the factors: First—The best and most skillful construction of the device, and its adaptability to the use for which it is intended. Second—The cost of the valves themselves and the probable cost of maintenance during the period of their service after they shall have been installed. Third—The safety of the valves, ensured by adequate strength and proper adjustment for maximum requirements in eliminating as far as may be the dangers to property and the lives of those in charge, to which inferior equipment offers constant menace.

The "Fairbanks Valves" cover all those requirements and are the *best*,

Because—Perfectly reliable.

Because—Of the long wearing qualities of the *Vulcanized Asbestos Disc.*

Because—The disc rings are set firmly in their holders, without the use of pins, nuts, etc., and cannot fall or work out.

Because—The discs can be removed and renewed without disconnecting from pipe line, by simply removing the bonnet.

Because—They guide disc to seat by four ribs cast in the body.

Because—The seat of the valve being *round* prevents sediment, scale, etc., lodging upon it.

Because—The stuffing boxes are packed with *Vulcabeston* braided round packing ready for use.

Because—They are approved and used by all the best architects, contractors and engineers.

See our advertisement, page xxxiii.

SCHOULER PATENT SANITARY STALL FLOOR.

WE NOTICE the growing demand and use of the W. W. Schouler Patent Sanitary Stall Floor and Door Guide and Weather Strip throughout the country, and that they are being used by all the farm barn and stable owners. Wherever cement construction is called for by prominent architects, these specialties are also noted—the following being a few in the vicinity of New York: By Burnett & Hopkins, Architects, the Schouler patents have been specified in buildings for J. C. Colgate, Bennington, Vt.; J. W. Doan, Thompson, Conn.; N. V. Ream, Thompson, Conn.; F. W. Vanderbilt, Hyde Park, N. Y.; C. H. Mackay, Roslyn, L. I.; J. D. Topping, Sound Beach, Conn.; Percy R. Pyne, Bernardsville, Conn.; W. C. Gulliver, Southampton, L. I.; Dr. Wyckoff, Southampton, L. I.; Richard Lounsbury, Bedford, N. Y.; R. B. Van Courtlandt, Mount Kisco, N. Y.; H. McK.

Twombly, Madison, N. J.; O. H. Kahn, Normandy Heights, N. J.; Henri Wortheim, Morristown, N. J.; W. D. Sloan, Lenox, Mass. By C. P. H. Gilbert, Architect: W. D. Guthrie, Locust Valley, L. I.; Raymond Hoagland, Oceanic, N. J.; J. F. Dryden, Bernardsville, N. J.; H. C. Humphrey, Glen Cove, L. I. By Palmer & Hornbostel, Architects: W. W. Caswell, Mamaroneck, N. Y.; J. C. Trumbull, Bay Shore, L. I. By Carrere & Hastings, Architects: E. C. Benedict, Greenwich, Conn.; C. N. Bliss, Oceanic, N. J. Also in buildings for J. K. Corbiere, Caldwell, N. J., J. C. Thain, Architect; P. Auerbach, Hewletts, L. I., Adams & Warren, Architects; New York Riding Academy, B. L. Gilbert, Architect. In the John Wanamaker Stables at Newark, N. J., there are 112 stalls of the Schouler make; L. Bamberger & Co., 93 stalls; Meadowbrook Stables, 126 stalls, and the A. D. Mathews Stables in Brooklyn, 60 stalls.

A SUCCESSFUL COMPANY.

FEW industrial enterprises have established a more enviable reputation for high-class goods, with honorable and square dealings than the Celadon Roofing Tile Company, whose offices are at No. 156 Fifth Avenue, New York, and No. 204 Dearborn Street, Chicago. Established in 1888 and taking for its motto "First-class products only," the company has moved steadily forward until for years its many varieties of Roofing Tile have been the recognized standard of excellence in this country. The company has recently received an impetus to its business by the election of Mr. William R. Clarke, its former vice-president and treasurer, to the position of president and general manager. Mr. Clarke has been actively engaged in the company since its organization and is admirably fitted to take charge of its large and growing interests. Mr. C. Layton Ford, a man of wide experience in commercial lines, has been elected to succeed Mr. Clarke as first vice-president, and Mr. E. S. Marvin, former superintendent of the American Temperance Life Insurance Association, has been chosen treasurer. Mr. Henry S. Harris, second vice-president, and Mr. Alvord B. Clarke, general superintendent, continue in charge of the Chicago office and Western Department.

The Celadon Roofing Tile Company has furnished tile for hundreds of the best buildings in the country, including government and public buildings as well as many of the best private residences. They are furnishing tile for the roofs of twenty-six large buildings of the Army and Navy Hospital at Washington, D. C. The company manufactures hard-burned, vitrified tiles only, which are distinguished for their even color throughout their entire thickness, and for an almost complete absence of porosity, thus showing the perfect annealing of their substance, which can only be effected by careful and scientific methods of burning when applied to a superior clay or shale. The company is about to make extensive additions to its plant at Alfred, N. Y. We predict for the business a most prosperous future.

TO PREVENT "SWEATING" OF PIPES.

DURING the warm weather considerable annoyance is experienced in dwellings, hotels and office buildings, and much damage done to upholstery, carpets, furnishings, floors, walls, etc., by the dripping of "sweat" from unprotected cold water pipes. This is the moisture that condenses on pipes of low temperature, when they pass through atmosphere of a higher temperature.

By insulating such pipes against the surrounding atmosphere by the use of proper pipe covering, the "sweating" can be prevented. Care must be exercised, however, in the selection of a covering, because, while it may prevent dripping, it will, unless non-absorbent, become saturated with moisture. This being held against the pipe causes rust and decay; in which event the cure is worse than the disease.

A covering is required which will not only act as a non-conductor, thus preventing condensation on the surface of the pipe and consequently stopping all dripping, but one that is non-absorbent.

Anti-sweat Pipe Covering, manufactured by the H. W. Johns-Manville Co., 100 William Street, New York, fulfills these requirements completely. Being a perfect insulator it prevents "sweating," and being non-absorbent it protects the pipe from rust and decay. Full information and samples can be had on application.

SUPERIOR GRAPHITE PAINT.

THE Detroit Graphite Manufacturing Co., with offices at 141 Broadway, New York, report largely increased sales of their well-known product "Superior Graphite Paint" for the protection of structural steel in buildings and bridges. Regardless of the many arguments for and against this coating, its continued use by prominent architects and consulting engineers is confirmed by the many barrels bearing the trade mark and stencils of this company, which may be seen at the site of numerous prominent buildings of steel frame construction, being erected in this city. The demand for this paint has shown a steady and consistent growth and is, no doubt, due to its durable qualities, which have been demonstrated by its preventing rust on bridges and metal piers continually exposed to the action of the elements.

Literature, brief but attractive, may be had upon application to the above address, and stating wherein this material is believed to be superior, together with half-tones of buildings and bridges on which it has been specified and used. It is manufactured in different shades which are recommended for successive coats.

IMITATION MARBLE.

ARTIFICIAL Marble is not always imitation marble; it is one thing to mix together plaster or cement with color and spread out the mixture, calling it "artificial marble" and quite a different thing to copy a natural marble, getting each color and tint and vein in its proper order and place, making the product resemble the real. The largest producer of imitation marbles in the world is the Mycenian Marble Company, 524 West 34th Street, New York. It developed the processes by which close imitations can be made, and connected with the company are the most skillful men in this business in any part of the world, artists of the highest order. Their work is found in the best of the modern buildings and there are but few persons who can distinguish it from nature's work.

THAT EASY MOVEMENT.

IN THOSE marvelous groups of high buildings, which have been raised with unprecedented energy in New York, Chicago, St. Louis, Philadelphia, Boston, etc., the Bommer Spring Hinge has been generally used. They have become famous for that easy movement; it is their peculiarity. They never fail to give satisfaction, therefore, it is safe to specify them.

Corner in Dining Room, The Gregorian, 42 West 35th Street, New York. Clarence True, Architect. Heating Apparatus installed by John F. Sayward & Co., 21 West 24th Street, New York.

UNIVERSAL SAFETY TREAD.

THE increasing use of Universal Safety Tread, for the last two and one-half years, proves its claim to being a positive safeguard against slipping. It has recently been installed upon the Union Railroad Station at Troy, New York; the service stairs of the Cafe Martin, Broadway and Fifth Avenue; the sidewalks ot Parker House and Young's Hotel, Boston, Mass.; the elevator landings of the Colorado Building, Washington, D. C.; the new Widener Memorial, Philadelphia, Pa.; on All Saints' Church, Madison Avenue and 129th Street, New York; and numerous school houses, engine houses and public buildings throughout the country. It is specified, by the leading architects, for stairways, vault lights, elevator landings, runways, and difficult and slippery places in buildings of every description. New York office, 45 Broadway.

JOSEPH DIXON CRUCIBLE COMPANY, JERSEY CITY, U. S. A.

WITH the advancement of this remarkable age of steel, the selection of a proper coating for the protection of the metal has developed into a question of vital importance. Dixon's Silica-Graphite Paint, the first graphite paint made, has proved its superiority over other coatings for the protection of steel and iron in all countries and climates of the world. For over forty years it has received the approbation of the leading architects and engineers, who have specified it for their work.

Among the structures protected with Dixon's Silica-Graphite Paint may be mentioned the Knickerbocker Hotel; St. Regis Hotel and Apartments; French Hospital; Broadway Exchange Building (largest office building in the world); and the Astor Hotel, New York City; piers and bulkhead buildings of the North German Lloyd Steamship Company, Hoboken; and Buildings of the International Steam Pump Company, Harrison, N. J.

STRUCTURAL AND ORNAMENTAL IRON AND BRONZE WORK.

FIFTY years ago The Snead & Co. Iron Works started to manufacture iron work for buildings and have been successfully doing so up to the present time. In 1898 the Louisville plant was destroyed by fire. The company found, on looking up their records, that most of their work had been done in the East and therefore decided to erect a new plant in Jersey City, their present address.

They have successfully installed both structural and ornamental iron work in prominent and representative buildings in different cities of the United States. They also manufacture the Green-Snead System of Bookstack and Shelving, which is installed in the Library of Congress and other libraries throughout the United States.

WISCONSIN GRAPHITE PAINT.

ARCHITECTS are naturally interested in all preparations that really preserve the structures they plan. Leading lights of the profession frequently specify Wisconsin Graphite Paint for painting structural steel, and prominent builders insist upon its use. Where such practical leaders point the way, it is surely safe to follow. This famous paint is impervious to acids, heat and cold. Wherever water eats metal or rust corrodes, it interposes a shield of perfect protection, stops loss, and saves the expense of frequent renewals and repairs. Cheap, indifferent paints let in the sun, rain and rust, thus eating the very life out of exposed surfaces. To introduce their specialty, the Wisconsin Graphite Company, Pittsburg, Pa., gladly send a generous sample to any architect requesting it.

ASBESTOLITH.

NOW that Asbestolith has been approved by the Building Department, as a fire-proof material, there is no doubt but architects have in it a material for floors, trims and doors they have long sought for. Being laid plastic in one continuous sheet furnishes all the sanitary features required and added to this are its fire-proof qualities. The colors are soft and pleasing and with their scheme of borders and solid fields there is every look of cleanliness. Several prominent hospitals have specified it, in which a sanitary base of the same material is added. We know of one large hotel where Asbestolith is specified for all bed-rooms and bath-rooms. The main office of the company is at 156 Fifth Avenue, New York.

THE W. S. TYLER COMPANY, CLEVELAND, O.

THE W. S. Tyler Company of Cleveland, O., is one of the largest firms in the country in the ornamental iron and bronze business. They make a specialty of ornamental stairs, entrance ways, elevator cars and enclosurers, bank railings, grilles, store fronts, etc. They have their own iron and bronze foundry, which enables them to turn out castings for modern building work in a complete and artistic manner. They started in this line of work some twenty-five years ago, have steadily increased their capacity, and to-day are considered foremost artisans in this line of work. They have furnished the ornamental iron and bronze work in some of the largest buildings in the country, one of which is the Land Title Company's Building, Philadelphia, Pa., which is almost completed. They now employ over eight hundred men and are equipped to handle very large contracts. Estimates will be cheerfully furnished, and special designs furnished upon request.

PROTECTION FROM FIRE.

SOMETHING unusual in connection with Automatic Fire Sprinkling equipments is now being installed by Francis Bros. & Jellett, Inc., New York and Philadelphia, in the new building being erected for the Butterick Fashion Company, corner of Spring and MacDougal Streets, New York City. In any building in which there are a large number of employees it is important that they should know instantly when a fire has broken out in the building, so that they will have all the time available to get out of the building and avoid a panic.

In connection with the Automatic Fire Sprinkler equipment now being erected in this building, an elaborate system of automatic indicating apparatus is being provided, which will instantly locate the start of a fire and register the location in each section of every floor of the building, an annunciator being placed on each floor where the employees can see it clearly the instant that water begins to pass through the pipe, the annunciator indicating the location of the fire. With this knowledge of the location of the fire there is no reason why there should be any panic of the employees leaving the building, because by a system of rules the employees on floors above where the fire has started will be given the right-of-way on the stairways, and the occupants of the floors below where the fire has started may follow at their leisure. This system should commend itself to owners of buildings in which large numbers of employees are congregated.

"AMERICAN ART IN BRONZE AND IRON."

THE second number of the magazine *American Art in Bronze and Iron* has just been published, and in its design and typography it is as artistic and well executed as any of the beautiful bronze work it illustrates. The work of the firm of Jno. Williams in bronze and iron is known to all the leading architects from Maine to California, and it is this rich field of material which makes the publication of value as a reference book, and especially is this true as it groups designs of one sort in each issue. The firm of Jno. Williams may rightly be termed specialists in the field of artistic metal work, executing as it does solely the ornamental architectural metal work and sculptural work from designs by our leading architects.

TELEPHONE SYSTEMS IN PRIVATE HOUSES.

THE private house of to-day, instead of being equipped with a speaking tube as was the custom a few years ago, generally has a modern telephone system connecting the various rooms with each other. The main advantage of the telephone over the speaking tube is that one outlet or one 'phone can be used to communicate to all of the different stations, whereas when the speaking tube was used, a separate mouthpiece was needed for each and every station. Arrangements should be made for bringing the cable to a point where it can be attached to wires going to the stable, greenhouse, etc. These and other patterns can be obtained from the Ericsson Telephone Company, No. 296 Broadway, New York City, who sell their telephones outright and subject to no rental or other charges. Their telephones are durable and can be relied upon as sure to give satisfaction.

FOLLANSBEE BROS. CO.

ONE of the leading industries is that of tin plate and sheet metals, and the company doing an extensive business is Follansbee Brothers Company of Pittsburgh. They are manufacturers of Roofing Tin Plate. The well-known brand, "Scott's Extra Coated," is made by them. This plate is to be found on many prominent buildings throughout the country. They have orders on their books at present for car load shipments of this famous brand to Illinois, Wisconsin, Kentucky and Tennessee, and many for smaller shipments to other parts of the United States.

For those wishing a genuine iron base roofing plate they offer Follansbee Pure Iron Old Style, which is made especially for them in Wales by one of the oldest and best Welsh manufacturers. It has met with great favor with architects, being a genuine pure iron plate. Each sheet has the company name and year of manufacture stamped on it. Last August they moved into their new warehouse at Liberty and Short, Second and Third Avenues. This building was put up by them as a metal warehouse and was constructed for strength as well as convenience. It measures 120 by 160 feet and has the Pennsylvania Railroad track into the building. They are always pleased to see their friends and show them through the most complete metal house in the country.

ZINC WHITE.

THE rapid education of paint consumers to the advantages in beauty, economy and durability offered by paints based on zinc oxide has resulted in doubling the consumption of that material in the past five years. The prejudice of painters, engendered by improper use of the pigment at the time of its first introduction, is also disappearing with the spread of more rational methods; so that there are now few painters of progressive habits who do not use a greater or smaller proportion of it in white or tinted paints for outside work. For interior work, it has long been used exclusively by all painters of advanced ideas.

FIRE-PROOF CONSTRUCTION.

THE Roebling Construction Co., has established branch offices in San Francisco, St. Louis, and Seattle. Among the important fire-proofing contracts awarded to them recently are the following: Hibernia Office Building, New Orleans, D. H. Burnham & Co., Chicago, Architects; Alexandra Apartment Hotel, Toronto, Canada; New Amsterdam Theatre, 41st Street and Broadway, New York, Herts & Tallant, Architects; Grant Office Building, Seventh and Market Streets, San Francisco, N. J. Sharp, Architect; First National Bank Building, Cincinnati, Ohio, D. H. Burnham & Co., Architects.

PROFESSIONAL AIMS.

C. H. DAY.

ACCORDING to the view the professional man takes of his vocation, so we find him dealing with the problems that are presented to him. His aim in every instance is either to set the task of making himself familiar with the subject he takes in hand and to work it out patiently and systematically according to principles and rules, or, on the other hand, to treat the work as a mere matter of business, to be got over as quickly as possible. When his calling is a means of livelihood as well as a recreation, there is often the temptation to look more on the business side. A commission comes to him as a bait, something to catch hold of and turn to his own advantage. It is a matter of percentage, of emolument, of business, that may bring him in further work. And it is this incentive that is perhaps the most frequent amongst a struggling profession. The work is impatiently done, there is little deliberation in the choice of methods to be used, the easiest and quickest is the one chosen, a method which most readily grasps any precedent, and prefers to study examples rather than principles. The busy architect has no time for original investigation or effort; to him a few designs of buildings of a similar description are eagerly sought after. It is easier to take a hint than to endeavor to solve the problem *de novo*;—his work, in short, falls into a sort of groove cut out or made by previous architects who have gone over the same ground, assisted by the advice of employers, contractors, or tradesmen. His aim is to follow the line that has been marked out by predecessors in the field, without troubling himself about new roads or paths that may be more direct and successful. It is not only the busy man that takes the easy way, but the incompetent. As Herbert Spencer says: "The average intellect cannot grasp a demonstration even when the matter is concrete, and still less when it is abstract;" so the average architect is content to accept the demonstration that is ready to his hand. But both the busy and incompetent artist may be thoroughly honest; they may desire to do the best for their client, and they do it in the way they think right. They consult their clients' wants, take advice, obtain information before they commence their design; their aim is not only to satisfy and please, but to obtain reward and advertisement by their efforts. Much excellent work is turned out by men whose aim is to do the best they can without great study. They have neither time nor competence to do more. This singleness of aim is at least honest; but the business man does not always stop there: he likes to make a good advertisement by his building, to make it attractive externally, and yet to please his client as far as he can—two good things in their way, but which can be very often carried too far. Attractiveness can be carried to an extreme; wasteful and extravagant ornamentation may be employed on a building that should be reserved and quiet, at a greater cost than was justified. Again, there are two ways of pleasing a client—one by saving his pocket, and the other by gratifying his whims and tastes, and the architect who tries to do both necessarily fails to satisfy anybody. A too easy compliance with the wishes of a client may be bought at a high price, if it involves a sacrifice of a good plan—some alteration in it that will spoil it, or the introduction of a feature externally that will injure the effect, or of a style or mode of decoration that will render the design ridiculous. How many good designs have been sacrificed to this want of firmness on the part of the architect in resisting the demands of a client for some alteration or introduction that is quite objectionable or absurd—the rearrangement of a plan in some essential point—as the position of a room, or the alteration of the doors; the addition of a conservatory to the front of the house; the placing of the front door right in the centre of a front facing road, instead of at the side; or perhaps in the introduction of a meaningless tower, or the insistence on a kind of window or decoration that is out of character with the design. We have known clients to ask for the most unreasonable things—such as placing windows on two sides of a room, for equal-sided rooms, etc. It is equally impossible to please everybody on a building committee or their tastes in matters of fitting and decoration, though this appears to be the aim of many who design public buildings, municipal offices, and the like. Committees are often composed of men interested in various building materials or firms, which explains many curious arrangements and other things being done that lack harmony. A desire to increase their business relations with large firms and tradesmen is another more reprehensible practice. In the specification for a large building the architect has the opportunity of providing that certain materials and goods should be supplied by certain firms named or to be approved by him. We do not say such a practice is general or common; but it exists, and there are men in the profession who largely advertise themselves in this way. A large order goes to the quarry of Messrs. So and So, to the brick and terracotta manufacturers, and like orders go to the structural engineer, the ventilating engineer, and other trade firms, who make known to their customers that they are supplying goods to the said building. The services thus rendered are mutual. The firms make known the architect's name to their customers and it is a good advertisement all round.